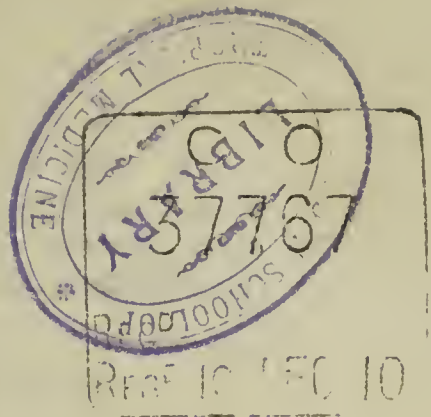


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16.12.10



STRAITS SETTLEMENTS.

The Straits Settlements Medical Report for the Year 1909.

1. *Population and Health.*—The following table shows the estimated population and the birth and death-rates for the years 1908 and 1909:—

SETTLEMENT.	Estimated mean Population.		Births.		Deaths.		Birth Ratio per mille.		Death Ratio per mille.	
	1908.	1909.	1908.	1909.	1908.	1909.	1908.	1909.	1908.	1909.
Singapore ...	271,060	277,658	6,084	6,196	12,726	10,779	22·45	22·31	46·95	38·82
Penang ...	133,067	133,697	2,942	2,706	5,738	5,006	22·10	20·24	43·12	37·44
Province Wellesley	121,219	122,216	4,328	3,880	3,627	3,627	35·79	31·74	29·87	31·28
Dindings ...	4,532	4,594	185	169	251	232	40·82	36·79	55·58	50·50
Malacca ...	98,138	98,526	4,535	4,043	4,699	4,085	46·21	41·03	47·88	41·46
Total ...	628,016	636,691	18,074	16,994	27,041	23,925	28·75	26·69	43·06	37·58

2. The mean estimated population which for 1901 calculated from the Census returns was 572,249, is estimated at 636,691 for 1909. The increase is mechanical, based entirely on the increase between the Census figures of 1891 and 1901, the natural means of estimating on the number of births and deaths and immigration and emigration not being practicable on account of records for the latter not being reliable.

3. The birth-rate has declined in all the Settlements.

4. The death-rate is the lowest registered since 1899. The deaths occurring within the Singapore Municipal limits which were 10,943 in 1907 and 11,238 in 1908 were 9,440 in 1909, giving a rate of 38·56 per mille, compared with 46·78 in 1908.

5. Of the number of deaths registered in 1909 4,714 were among infants under 1 year of age, which represents a percentage of 19·7 of the total. The deaths amongst infants for the years 1908 and 1907, respectively, were 5,110 and 4,339. The ratio per mille for 1909 after excluding the births of children born elsewhere than in the Colony was 263·67, against 265·63 in the previous year. Of the 4,714 infant deaths registered 3,082 are returned as due to "convulsions."

6. There has been but little advance made with regard to a midwife's bill during the year. We are gradually training some native women in the maternity wards of the General Hospital. These wards are slowly increasing in favour amongst the Chinese and with more material the work will, I trust, progress satisfactorily and bear fruit in the future.

7. The following table gives the number of cases of Zymotic Diseases in the several Settlements in the years 1908 and 1909, and deaths therefrom, not including cases imported into the Colony:—

SETTLEMENT.	PLAGUE.				CHOLERA.				SMALL-POX.			
	1908.		1909.		1908.		1909.		1908.		1909.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Singapore ...	12	12	5	5	134	121	84	76	26	10	41	8
Penang ...	...	...	...	...	...	...	...	...	5	2	...	...
Province Wellesley...	...	...	...	...	64	57	...	...	...	...	21	3
Malacca ...	...	...	...	...	..	...	...	...	...	...	...	...
Total ...	12	12	5	5	198	178	84	76	31	12	62	11

8. *Plague*.—Of the 5 cases reported 4 were Chinese and 1 a Tamil. All the cases occurred in the Chinese quarters of the town. Two of the cases were discovered after death. In no case could the source of the infection be traced.

9. *Cholera*.—This disease broke out in Singapore in August, 1908, and continued until the end of February, 1909. After about 6 weeks of freedom there was a recrudescence which assumed epidemic form continuing up to the middle of May. The last case reported occurred on the 14th September. Altogether there were 84 cases of which 76 ended fatally. The outbreak was confined to the Settlement of Singapore.

10. *Small-pox*.—In Singapore there were 41 cases notified with 8 deaths, compared with 26 in 1908 with 10 deaths. In Province Wellesley there were 21 cases with 3 deaths, the infection probably being introduced from Kedah. All contacts were vaccinated.

11. *Diphtheria*.—Ten cases were notified as against 13 in 1908 and 18 in 1907. All the cases were children of whom 1 was European, 2 were Eurasians, 6 Chinese and 1 Jew. Two cases ended fatally.

12. *Enteric Fever*.—There were 235 cases notified in Singapore, compared with 247 in 1908 and 353 in 1907, of these 89 cases ended fatally. In Penang 15 deaths were returned under this head, in Province Wellesley and Malacca none. As stated in the previous year's report the figures for typhoid cannot be relied upon as many cases are probably included under "Fever Unspecified."

13. *Beri-beri*.—1,506 deaths were registered under this head. The following table gives the figures for the last 5 years:—

Deaths from Beri-beri.

—	1904.	1905.	1906.	1907.	1908.	1909.
Singapore ...	1,621	1,233	998	1,213	1,117	873
Penang ...	307	291	282	212	534	399
Province Wellesley	75	70	6	9	20	11
Dindings ...	...	3	3	5	2	4
Malacca ...	284	291	218	187	227	219
Total ...	2,287	1,888	1,507	1,626	1,900	1,506

14. The following are the figures of all cases treated in the various hospitals for the years 1906, 1907, 1908, and 1909:—

<i>Year.</i>		<i>Total cases.</i>	<i>Deaths.</i>	<i>Percentage of Deaths.</i>
—		—	—	—
1906	...	1,971	296	15·01
1907	...	1,806	243	13·45
1908	...	2,777	284	10·23
1909	...	2,118	224	10·57

The results from the use of parboiled rice continue to give satisfaction and the native patients at the several hospitals are exclusively fed on cured rice.

15. The returns from the Pasir Panjang Beri-beri Hospital show 383 cases treated of whom 181 were discharged cured and but 1 died of the disease.

16. Work on the ætiology of this disease has been in progress throughout the year at the Research Institute, Kuala Lumpur, under Dr. FRASER and a despatch has already been sent through the High Commissioner to the Secretary of State giving cover to a booklet recording the results. In the present state of our knowledge it has not been found possible to advise Government as to any legislative measures of a preventative nature although the results of work at many different laboratories point that this must soon come.

17. *Venereal Diseases.*—The admissions to all hospitals in 1909 were 2,603 with 49 deaths. In 1908 there were 2,114 with 55 deaths and in 1907 2,460 admissions with 46 deaths. Of the admissions in 1909, 231 were prostitutes.

18. *Phthisis.*—Deaths registered from this cause numbered 2,659, against 2,988 and 2,820 in 1908 and 1907 respectively. This high mortality is likely to continue until some practical measures are put in force in the larger towns to lessen overcrowding, improve ventilation and remove advanced cases. The mortality in Penang was 901 as compared with 917 in 1908.

19. *Dysentery and Diarrhœa.*—There were 1,241 and 515 deaths, respectively, from these causes as against 1,394 and 638 in 1908. 2,458 cases were admitted into the hospitals of the Colony of whom 796 died, compared with 2,437 cases with 889 deaths in 1908. Patients generally come for admittance to hospital in the last stages of these diseases when treatment is unlikely to be of much avail and consequently a high death-rate is to be expected.

20. *Malaria.*—There is no doubt that the figures under this head except from hospitals are unreliable. The diagnosis of native unqualified practitioners cannot be accepted and the Registrars of Deaths can hardly be expected to come to correct conclusions in many cases without post-mortem examinations. As pointed out by the Singapore Municipal Health Officer it is probable that in a large number of those suffering within the Municipality primary attacks were contracted elsewhere than in Singapore. There were 2,589 deaths during the year of which 1,670 occurred in Singapore. In 1908 there were 3,062 of which 2,100 were in Singapore. During the year the following works were carried out as preventive measures:—

In Singapore:—Filling up swampy ground in Lock Hospital compound. Filling up low land near Pearl's Hill. Clearing land at St. John's Island.

The Singapore Municipality continued to issue notices to fill or drain collections of water, to oil pools, for the destruction of receptacles containing unused water such as barrels, oil tins and broken bottles in the neighbourhood of dwellings. The persistent habit of the natives who, provided with a continuous water supply, continue to store water in jars which remains stagnant and often breeds mosquitos is being actively combated.

In Penang:—The filling in of low-lying spots at the Quarantine Station, Brick Kiln Road, District Hospital, by Northam Road, by Perak Road and the compound of Deputy Engineer's house. The Municipality maintained a gang of coolies cleaning ditches, draining ponds, oiling ponds and removing old tins, jars and other receptacles. A considerable area of low-lying lands were filled up by the owners under nuisance notices. Several masonry drains were extended. The Rural Boards

of Penang, Province Wellesley and Dindings are doing good work in constructing, maintaining and extending concrete drains and in draining, filling or oiling ponds and swampy ground in the immediate vicinity of the villages.

21. *Sanitation*.—The improvements referred to in last year's report were continued in 1909. The back-lane scheme for Sultan Ali's estate has been nearly completed. A scheme for the improvement of Kampong Kapur has been suggested and the preparation of the estimates of cost taken in hand. Schemes for back-lanes in other portions of Singapore town have been approved. The question of sewage disposal in Singapore is not yet finally settled. An expert from home was called in during the year and his report is under consideration.

22. *Ankylostomiasis*.—There were in all 335 cases admitted to the different hospitals in 1909 as compared with 192 in 1908. The deaths due to this disease numbered 80 and 51, respectively, for the two years referred to.

In consequence of a despatch from the Secretary of State circulars were issued early in the year to estate managers urging the strict enforcement of all rules bearing on sanitation. The following points were considered :—

1. Latrine accommodation.
2. Defæcation in unauthorized places.
3. Supervision by estate medical officers.
4. The issue of leaflets to the general public.
5. The distribution of anthelmintics.

The leaflets were distributed about the end of the year; they were on the lines of those issued by the Government of Dominica as prepared by Dr. ASHFORD NICHOLLS.

23. Hospitals and work done :—

Year.	Number of Patients Treated.			Number of Deaths.			Percentage of Deaths to Total Treated.		
	Europeans.	Natives.	Total.	Europeans.	Natives.	Total.	Europeans.	Natives.	Total.
(a) 1907 ...	1,193	27,515	28,708	74	3,614	3,688	6.20	13.13	12.85
(b) 1908 ...	1,287	29,083	30,370	83	3,948	4,031	6.45	13.57	13.24
(c) 1909 ...	1,398	28,868	30,266	70	3,565	3,635	5.01	12.35	12.01

Includes Lunatic Asylum :—
 { (a) 483 cases and 57 deaths.
 { (b) 508 cases and 65 deaths.
 { (c) 556 cases and 78 deaths.

24. The diseases responsible for the greatest number of admissions and deaths are shown in the subjoined tables with the corresponding diseases and deaths in 1908:—

Disease.	1908.		1909.	
	Total treated.	Deaths.	Total treated.	Deaths.
Malarial Fever	4,587	504	5,183	331
Dysentery	1,452	658	1,743	670
Diarrhœa	909	229	714	126
Beri-beri	2,777	284	2,118	224
Tuberculosis (including Phthisis)	1,032	601	1,080	541
Anæmia and Debility ...	792	168	626	117
Pneumonia	282	140	337	152
Enteritis	195	35	137	24
Enteric Fever	243	96	316	79
Venereal Diseases	2,114	55	2,603	49
Pyrexia	683	4	671	3
Bronchitis	435	17	410	19
Ulcers	2,116	...	2,807	19

25. *Lunatic Asylum*.—The total number treated was 556 (453 males and 103 females), against 508 in 1908. The recovery rate of 42·27 per cent on the admissions against 30·19 in 1908 is very satisfactory. The death-rate was 22·69 on the average daily number of residents. 351 patients remained at the end of the year.

26. *Maternity Wards, General Hospital*.—The total admissions were 173 as compared with 143 in 1908 and 105 in 1907. This small increase is gratifying to note and as these wards become better known it is to be hoped they will fulfil a long-felt want by providing sufficient material for the training of midwives.

27. *Beri-beri Hospital, Pasir Panjang*.—112 patients remained over from 1908 and 271 were admitted during the year making a total of 383 treated. Of the seven deaths but one was due to Beri-beri.

28. *Police Force*.—In Singapore 3,924 out-patients were attended to as compared with 4,454 in 1908. 388 were ordered to hospital as against 512 in 1908, the majority of the cases sent being for Malarial Fever. 306 candidates for the force came up for examination of whom 110 were rejected.

29. *Estates*.—5,302 cases were admitted into the Estate Hospitals in Province Wellesley during 1909, as against 6,182 and 4,874 in 1908 and 1907 respectively. The admissions were largely for bowel disorders, and fever. There were 135 deaths in 1909, compared with 72 in 1908 and 112 in 1907.

30. *Out-door Dispensaries*.—27,134 patients were treated at the different dispensaries, against 25,497 in 1908. The figures do not include out-patients treated by the Police Surgeon in Singapore which is dealt with under paragraph 28.

The building of a new Out-door Dispensary in Singapore in a more central part of the town has been sanctioned for 1910 and a site in North Canal Road has been selected for the purpose.

31. *Vaccination.*—The total number of vaccinations performed throughout the Colony in 1909 was 12,854, against 14,843 in 1908. The following table shows the number vaccinated (exclusive of those performed in the Prisons and Quarantine Station and by private medical practitioners) with the results in the several Settlements during 1909 :—

SETTLEMENT.	Number of Vaccinations performed.	RESULT.			
		Perfect.	Modified.	Failed.	Not seen.
Singapore ... {	<i>a</i> 2,533	2,533	Nil.	Nil.	Nil.
	<i>b</i> 1,870	1,791	5	10	64
Penang ...	3,020	2,670	267	32	51
Province Wellesley	3,795	3,440	179	154	22
Dindings ...	153	146	Nil.	7	Nil.
Malacca ...	3,133	3,082	25	25	1
Total ...	14,504	13,662	476	228	138

(a) By Government Vaccinator. (b) By Licensed Vaccinators.

32. *Quarantine.*—The numbers of passengers and crew examined on arrival in Singapore were 214,321 and 77,304, respectively, against 220,527 and 82,957 in the previous year.

Nine outgoing pilgrim ships with 5,337 pilgrims were examined on departure, as against 10 ships with 5,712 in 1908.

In Penang 118,836 passengers (including 4,027 outgoing pilgrims) and 43,135 crew were examined, of these 23,058 passengers were detained on the Quarantine Island for observation.

The stations both at Singapore and Penang were in continuous use throughout the year.

33. *Government Analyst's Department.*—The work of the Department is still increasing. There is, however, a fall in the revenue of \$1,020, compared with 1908, owing to a decrease in the amount of petroleum oil in bulk imported at Pulau Bukom works.

The new office of Deputy Government Analyst in Penang was opened on the 1st June and \$2,189.54 was collected to the end of the year.

34. *Medical School.*—There are now 72 full course students, compared with 58 in 1908, studying for the L. M. S. diploma of whom 17 are in their fifth year. Four students were allowed to resign, of whom one left for Europe to continue his studies. A considerable number of new books and apparatus were purchased during the year and many additions made to the museum. The extension of the present buildings to provide a reading room, museum and class room is under consideration.

35. *Pathological Work.*—The new Bacteriological laboratory and the morgues at Sepoy Lines and Tan Tock Seng's were completed and taken over in the early part of the year. The large amount of routine work such as all post-mortems, blood and water examinations, bacteriological examinations, classes in connection with the Medical School leaves the Pathologist no time for the prosecution of work in the nature of original research. This is regrettable. With the training of a suitable student from the school as pathological assistant it is hoped the necessary leisure will be available at no distant date. 1,278 autopsies were performed at the Tan Tock Seng's Hospital Mortuary and 264 at Sepoy Lines.

36. *Medical Department, Labuan.*—No epidemic nor infectious diseases occurred on the island during the year. The birth-rate and death-rate per mille stands at 22.23 and 23.93, against 20.82 and 25.83, respectively, in 1908. The total number of patients treated in the hospital was 307 as against 167 and 183 in 1908 and 1907. The chief

diseases treated were Malaria, Beri-beri and Venereal diseases. A new ward for females was added during the year.

37.—(a) *Miscellaneous*.—Eight certificates as chemists were issued during the year under the Deleterious Drugs Ordinance and 45 licences for either wholesale or retail or both were issued under the Poisons Ordinance in Singapore, 14 in Penang and 4 in Malacca.

(b) One hundred and ninety-eight (198) medical practitioners stood on the register on the 31st December, of these 119 are in the service of the Straits and Federated Malay States Governments, the others being in private practice.

(c) Two Colonial apprentices from the Madras Medical College arrived during the year and were examined at the Medical School. One passed.

(d) One probationer passed out during the year from the Maternity Hospital bringing the total number of certificated midwives to 14.

38. *Staff*.—I took over the duties of Principal Civil Medical Officer from Dr. MCDOWELL on the 31st December, 1909, on his appointment to the Federated Malay States, and Dr. GIBBS, Medical Officer, Tan Tock Seng's Hospital, was appointed Medical Superintendent, Lunatic Asylum, to succeed me.

Dr. DANE returned from leave on the 18th June and took over his duties as Senior Medical Officer in charge of officials from Dr. MILLARD.

Dr. G. D. FREER, Principal, Medical School, was transferred to the Federated Malay States service on the 26th February and Dr. R. D. KEITH, Assistant Pathologist, was promoted to the vacant appointment. Dr. FINLAYSON acted as Principal until the 22nd June, owing to the absence on leave of Dr. KEITH.

Dr. W. H. FRY who was acting as Senior Medical Officer, Penang, returned to the Federated Malay States at the end of March and Dr. KEUN acted until the return from leave of Dr. CROUCHER. Dr. CROUCHER was appointed Senior Medical Officer, Penang, when on leave, he returned from leave on 19th May and took up his appointment.

Dr. HENNESSY acted as Medical Officer, Malacca, from 1st January, until relieved by Dr. WEIR on 29th March, when he was transferred to the Federated Malay States.

Dr. SHEPPARD returned from leave and resumed his duties as Medical Officer, Province Wellesley, on 25th January, relieving Dr. NICHOLAS who was then transferred to the Federated Malay States.

Dr. MILLARD returned to the Colony from the Federated Malay States on the 21st January and was promoted a Supernumerary Medical Officer *vice* Dr. NICHOLAS. He was transferred to the Federated Malay States on 5th July.

Drs. RATTRAY, FURNIVALL, SCANLON, SMITH, GRAY, WEBSTER, MCKENZIE, ROBINSON, WHITTLE, and MCHUTCHISON were appointed Medical Officers, Straits Settlements, during the year and reported their arrival in the Colony on 19th March, 25th March, 11th May, 11th May, 11th May, 5th August, 20th August, 22nd August, 12th December and 12th December respectively.

Dr. GRAHAM, Medical Officer, General Hospital, Penang, was transferred to Federated Malay States in February and Dr. COOPER from the Federated Malay States succeeded him. Dr. COOPER was re-transferred to Federated Malay States on the 26th October.

Dr. WELLINGTON, Medical Officer, Quarantine Island, was transferred to Federated Malay States on 12th May.

Drs. MCGREGOR and MCKENZIE resigned and returned to England in terms of their agreement owing to ill-health.

Dr. S. M. LIVESEY returned from Federated Malay States after temporary duty on the 27th February and was appointed Physiologist and Assistant Pathologist at the Medical School.

Mr. J. R. BROOKE, Assistant Government Analyst, was promoted Deputy Government Analyst, Penang, from 12th April, being succeeded by Mr. COWAP, Second Assistant Government Analyst. Mr. BROOKE was on 4th October, 1909, promoted to a post in the Government Monopolies Department and was again succeeded by Mr. COWAP. Mr. HADDON who arrived on 21st May as Second Assistant Government Analyst was promoted First Assistant Government Analyst *vice* Mr. COWAP from 4th October.

39. I append the following reports :—

- (a) Singapore Hospitals.
- (b) Penang Hospitals.
- (c) Province Wellesley Hospitals.
- (d) Malacca Hospitals.
- (e) Hospitals for Women.
- (f) Out-door Dispensaries.
- (g) Vaccination.
- (h) Quarantine.
- (i) Government Analyst's Department.
- (j) Medical School.
- (k) Pathological Department.
- (l) Labuan Medical Department.

and the following returns for Singapore, Penang, Province Wellesley, Malacca and Labuan are also attached :—

- (1) Statistics of Population.
- (2) Meteorological Returns.
- (3) Nosological Returns.

W. GILMORE ELLIS,
Principal Civil Medical Officer,
Straits Settlements.

SINGAPORE, 20th August, 1910.

APPENDICES.

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APPENDIX A.

SINGAPORE.

General Hospital.

REPORT BY Dr. J. LEASK, *Senior Medical Officer-in-charge.*

1. *Buildings.*—The partition walls of the native malarial ward were removed making it into one room.

2. The wire gauze enclosing the openings has been protected and, at the same time, made more accessible by putting the wire netting frames on hinges on the inside of the gauze.

3. A small latrine was erected in connection with the native admission ward.

4. A new European kitchen range was supplied which is adapted to burn longer billets of wood than the former.

5. Rubber paving was placed over the wooden paving of the roadway under the officers' ward porch.

6. A shed for latrine buckets and the night-soil cart was erected on the low ground in front of the European block.

7. One native ward cell was converted into a Hindu bathroom.

8. The two old mortuary buildings were demolished.

9. *Grounds.*—The gate at the west end of the Hospital was removed and the road closed to through carriage traffic.

10. *Gas.*—The pressure has been insufficient at times, and the flame was often blown out when the bye-pass was in action, leading to a good deal of escape of gas.

11. This latter was especially noticeable in the maternity wards where the wind was stronger.

12. The removal of the night-soil was regularly performed.

13. The removal of rubbish was regular.

14. The telephone service was unsatisfactory at times.

15. *Work done.*—The private European male wards were well filled during the year. On several occasions patients had to wait in the general wards until there was a vacant bed in the private wards. The daily average was 10·23 patients for 16 beds.

16. The European male general wards were well filled on some occasions, the greatest numbers being in February, May, June and September.

17. The daily average was 19 patients for 35 beds.

18. The European female private wards had a daily average of 1·82 for 8 beds.

19. The European female general wards had a daily average of 4·73 patients for 9 beds.

20. The maternity wards had a daily average of 3·15 European patients for 13 beds and 2·59 natives for 16 beds.

21. The native female wards were frequently overcrowded during the year having a daily average of 14·18 patients for 18 beds.

22. The native male wards were also frequently full during the period from the middle of March to the end of November.

23. The daily average was 122·28 patients for 204 beds.

24. As certain wards were more crowded than others the overcrowding was more serious than is shown by these figures.

25. There were 3,975 admissions to the whole Hospital (534 of whom were females), against 4,233 (of whom 376 were females) in 1908.

26. The total treated during 1909 was 4,104, against 4,370 in 1908: and the average daily sick was 178·10, against 168·04 in 1908.

27. There were 289 deaths (39 of these in females), against 377 in 1908.

28. The percentage of deaths to total treated was 7·04, against 8·6 in 1908 and 8·716 in 1907 thus showing a steady decrease.

	Remaining 1908.	Admitted	Total treated.	Discharged.	Transferred.	Absconded.	Died.	Remaining 1909.	Percentage of Deaths to total treated.
Europeans ...	23	770	793	711	10	...	33	39	4·16
Natives ...	93	2,676	2,769	2,295	91	63	256	64	9·2
Native Police ...	13	529	542	473	1	46	...	22	...
Total ...	129	3,975	4,104	3,479	102	109	289	125	7·04

29. *European Wards.*—There were 770 admissions to the European wards (204 of whom were females) including European police and maternity patients.

30. The principal causes of admission were:—Malaria 201, Venereal diseases 55, Injuries 44, Dysentery 30, Enteric Fever 23, Alcoholism 13, Tuberculosis, Appendicitis, Dengue and Myalgia each 11, Malignant tumours 8.

31. Others of interest were Diphtheria 3, Pneumonia 4, and Beri-beri 1.

32. The deaths in the European wards were 33 in number (9 being females) as against 42 in 1908, the percentage of deaths to total treated being 4·16, against 6·16 in 1908.

33. The principal causes of death were Enteric Fever 5, Dysentery 3, Malignant tumours 3, Intestinal Obstruction 2, and Tuberculosis 2.

34. Other causes of death of interest were:—Diphtheria 1, Venereal disease (Secondary Syphilis) 1, Pneumonia 1, Tetanus, Anæmia, Empyema, Abscess of Liver, Cirrhosis of Liver, Extravasation of Urine and Iodine poisoning each 1.

35. There were no deaths from Malaria or from Appendicitis in these wards.

36. *Native Wards.*—There were 2,676 (350 of whom were females) admissions to the native wards, including 101 admissions to the native maternity wards.

37. The chief causes of admission were Injuries 735, Malaria 543, Venereal diseases 184, Dysentery 120, Tuberculosis 98, Enteric Fever 69, Beri-beri 80, Pneumonia 54, Bronchitis 34, Abscess 33, Boils 20.

38. *Zymotic Diseases.*—Cholera 5, Plague 2, Dengue 2.

39. Alcohol was responsible for 8 native admissions.

40. *Deaths.*—The number of native deaths was 256 (of whom 27 were among females and 3 among native maternity patients), against 332 in 1908; giving a percentage to total treated of 9·2, against 11·01 in 1908.

41. The chief causes of death were:—Malaria 40, Tuberculosis 39, Dysentery 30, Injuries 30, Beri-beri 21, Pneumonia 20, Enteric Fever 17.

42. *Native Police.*—There were 529 admitted as against 667 in 1908.

43. The chief causes of admission were:—Malaria 193, Venereal diseases 62, Bronchitis 34, Injuries 33, Dysentery 16, Boils 11, Tuberculosis 10, Conjunctivitis 9, Asthma 7.

44. No disease was diagnosed in 43 cases, and 14 were returned as malingering.
45. There were no deaths among the native police.
46. *Maternity Wards*.—The total admissions were 173, against 143 in 1908, and they consisted of 72 admissions to the European wards and 101 to the native wards.
47. Of these admissions there were 135 deliveries, 4 abortions, and 35 (8 European and 27 natives) were not delivered being other cases of re-admission or those who left before delivery and did not return.
48. There was an increase in the numbers of European, Chinese, Sikh, and Japanese admissions, and a decrease in Eurasians, Tamils and Hebrews from 1908.
49. *Nationalities*.—

Europeans	...	...	...	63	against	37	in	1908.
Eurasians	...	...	...	7	"	9	"	"
Chinese	...	...	...	40	"	27	"	"
Tamils	...	...	...	29	"	39	"	"
Sikhs	...	...	...	15	"	10	"	"
Javanese	...	...	...	0	"	3	"	"
Hebrews	...	...	...	4	"	9	"	"
Japanese	...	...	...	15	"	8	"	"
Burmese	...	...	...	0	"	1	"	"

50. *Nature of the Cases*:—

Uncomplicated	...	...	...	...	123
Transverse position	...	...	...	...	1
Occipito-posterior position	...	...	...	...	3
Breech	...	...	...	...	1
Twins	...	...	...	...	0
Tedious	...	...	...	...	6
Miscarriage	...	...	...	...	1
Abortion	..	...	...	...	4

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51. *Children*.—Sex—male 68, female 67, of whom six males and three females were still-born.

Average Weights of the Children.

Europeans	...	...	...	...	7 lbs. $7\frac{3}{4}$ oz.
Natives	...	...	...	...	6 ,, $2\frac{3}{4}$,,

52. *Mothers*.—Three of these died; 1 from Eclampsia, 1 from Septic Pneumonia and 1 from heart failure after Malaria. The septic case had been five days in labour being brought to the Hospital.

53. *Operations*.—Induction of labour 3 cases (2 Eclampsia, 1 Placenta prævia, Forceps 4 cases.

54. The transverse case mentioned in Dr. FOWLIE'S report for 1908 as having been sent to the General Hospital for Cæsarian Section, did not die as was stated; but made a most satisfactory recovery after the operation.

55. *Pathological Cases*.—Placenta prævia 1 case, Eclampsia 2 cases (1 fatal), septic infection ending in fatal pneumonia 1 case, and post-partum hæmorrhage 1 case.

56. *Medico-Legal*.—Nine hundred and twelve persons were sent to the General Hospital by the Police, 145 bodies were sent for post-mortem examination by the Coroner and 80 persons were sent for observation as to sanity.

57. *Operations*.—(Not including obstetric operations). There were 254 surgical operations performed.

58. Among the more numerous were:—Abscesses incised 47, Amputations 17, Anal fistula 14, Hernia 17, Ischio-rectal abscess, Hæmorrhoids, and Circumcision each 10, Hydrocele 8, external Urethrotomy 5.

59. Other operations of interest were:—Removal of non-malignant tumours 4, of malignant tumours 2 (breast 1 and lip 1), Ligature of arteries for Aneurism 2 (1 Carotid, 1 Popliteal), Tracheotomy 4, Hare lip 3, Gastro plasty 1, Intestinal anastomosis for intussusception 1, opening and draining appendix abscess 3, excision of appendix vermiformis 4, Laparotomy for Liver abscess 2, for Splenectomy 1, for tuberculous peritonitis 1, for Ovariectomy 2: Wiring fractured bones 2 (1 Tibia and 1 patella), Trephining 4, Lumbar puncture 1.

60. *Staff*.—Senior Medical Officer—I was in charge during the year.

61. *Medical Officers*.—Dr. EDMUND G. WEIR was transferred to Malacca on 29th March.

62. Dr. JOHN GRANT MCGREGOR was invalided and left for Europe on 23rd July.

63. Dr. MALCOLM J. RATTRAY arrived 19th March, and was transferred for duty at the Quarantine Station on 11th May.

64. Dr. JOHN GRAY arrived from Europe on 11th May, and was transferred for duty at Tan Tock Seng's Hospital on 10th August.

65. Dr. MAURICE P. SCANLON took duty on 11th May having been engaged locally. He was transferred for duty under the Port Health Officer in October.

66. Dr. JOHN SUTTON WEBSTER arrived from Europe on 5th August and remained at the end of the year.

67. Dr. J. C. MCKENZIE arrived from Europe on 20th October, and was invalided and left for Europe on 17th December.

68. Dr. CHRISTIAN CATHCART ROBINSON arrived, on transfer from West Africa, on the 22nd October, and was transferred for duty under the Port Health Officer on 8th November.

69. Drs. EDWARD DENIS WHITTLE and GEORGE BROWN MCHUTCHISON, arrived from Europe on 12th December and remained at the end of the year.

70. *Dressers*.—Dresser V. SINNAH resigned on 14th February, and was replaced by I. A. DANKER on 17th February.

71. Dresser K. NALLATAMBY resigned on 16th March, and was replaced by TAMBY DORAY on 17th March.

72. Dresser CHIN LEONG SENG resigned on 11th June, and was replaced by N. SUPRAMANIAM on 24th June.

73. *Nursing Sisters*.—Miss M. J. MCNAIR, the Head Nurse, was in charge except for short leave from 23rd July till 27th August, and Mrs. ELSIE LEWIS, Matron, Maternity Wards, acted for her during her absence.

74. Miss ETHEL MURIEL SWINGLER resigned and left on 19th January, before the termination of her agreement.

75. Miss MAUDE WORTERS arrived from Europe on 5th March, to fill the vacancy by the retirement of Miss SWINGLER.

76. Miss HELEN MARY WALKER resigned on 24th December, before the termination of her agreement.

77. Miss M. A. HILL, Home Sister, went on leave prior to retirement, on 1st September.

78. *Nursing Probationers*.—Mrs. MARY DIAS commenced training on 1st January, replacing Miss HELEN GIBSON who had left in 1908.

79. Miss LILIAN WOLFE was transferred to Penang on 2nd January, and was replaced by Miss ROSE ANDRE, who rejoined on 2nd January.

80. Miss ELSIE JACKSON left on 6th March, and was replaced by Mrs. CATHERINE J. WILLIAMS, who commenced training on 20th March, and who resigned on 1st November.

81. Miss LENA FERNANDEZ was transferred to Kuala Lumpur on 19th April, and was replaced by Miss DAISY HILL, who commenced training on 11th April.

82. Mrs. COOPER ABBS completed her training in the maternity wards, passed her qualifying examination, was granted a Diploma to practise as Midwife, and left on 31st July.

83. Miss AGNES HOLMAN commenced training in the maternity wards on 2nd August in succession to Mrs. COOPER ABBS.

84. Miss NORAH AILEEN MOORHOUSE left on 19th September, and was replaced by Miss HELENA MORTON, who commenced training on 19th September.

85. Mrs. CATHERINE J. WILLIAMS left on 1st November, and was replaced by Mrs. JESSIE COWIE-PEARCE who had previous training and who commenced duty on 6th November.

86. Miss MARGARET MACKAY left on 22nd November, and was replaced by Miss EDITH WHEELER who commenced training on 27th December.

87. Miss ROSE ANDRE left on 31st December.

88. Miss B. C. STRATTENBERG left on 31st December.

89. *The Steward*.—Mr. R. S. RUFUS carried out his multifarious duties with efficiency.

90. *Clerical Staff*.—Mr. TAN YEW KOH and Mr. D. SUNDERUM have worked well during the year, and Mr. WEE PIT JIN has carried out his duties satisfactorily.

91. *Servants*.—These have shown no improvement in quality since my last report and only a few of the older and more reliable ones remain.

Police Force.

REPORT BY DR. DANE, *Police Surgeon*.

1. The total number of the force attending the out-patient room at the Central Station was 3,924, against 4,454 in 1908; 3,518 in 1907; 3,301 in 1906 and 4,283 in 1905.

2. The greatest number seen in one day was 29; the least 2.

3. Of these out-patients 388 were sent to the General Hospital as in-patients, compared with 512 in 1908, 289 in 1907, 294 in 1906.

In addition to these 388 patients, 180 were sent direct to the General Hospital by their own officers.

Of the 568 thus admitted to the General Hospital the most common diseases were Malaria 201, Venereal 70, Bronchitis 34, and Dysentery 16. No deaths occurred.

4. 306 candidates for the force were examined during the year. Of these, 196 were accepted and 110 rejected. The chief causes for rejection were under development 30, Venereal disease 27, Cardiac disease 14, Phthisis 7.

Of the 306 candidates 4 were Europeans, all passed; 47 were Sikhs, 27 rejected; 81 were Malays, 46 rejected; 26 were Indians, 17 rejected; 38 were Chinese, 23 rejected.

5. The Police Stations were inspected from time to time and reported on.

6. The work throughout the year was done by Dr. ELLIS. I only taking over at the beginning of 1910.

Prison Hospital.

REPORT BY DR. DANE, *Acting Senior Medical Officer-in-charge*.

1. The sanitary condition of the Prison is good, and the health of the Prison satisfactory—see Table 1.

2. *Admissions to Hospital.*—There were 1,181 admissions. This, with 45 who remained from the previous year, gives a total treated of 1,226. The average daily sick was 49·11, against 39·96 in 1908.

The diseases which showed most admissions were:—Diarrhœa 212, Fever (including Malaria but excluding Enteric) 180, Dyspepsia 84, Dysentery 66:

3. The figures for the different classes of prisoners can be seen from the following tables:—

—				Criminal.	Civil.	Vagrants.
A.	Total population of Prison	...	...	4,675	4,580	546
B.	Average daily population	...	...	952	114	45
C.	Total treated in Hospital	...	...	1,055	42	129
D.	Percentage of C to A	...	...	22·35	·91	23·63
E.	Total deaths	...	...	27	5	10

4. *Deaths.*—An examination of the medical records and case papers of the 42 prisoners who died shows that:—

27 arrived in Prison with their fatal disease. This includes the five civil and the 10 vagrants' deaths.

3 probably had the seeds of their fatal illness on them on arrival in Prison.

4 were due to relapses of diseases acquired before arrival in Prison.

2 were possibly similar relapses.

6 were due to disease which began in the Gaol.

—
42
—

Of the eight forming the last two groups.

One was Tubercular Pulmonitis and Enteritis after 2½ years in Gaol.

One was Tubercular Laryngitis and Pulmonitis after 3½ years in Gaol.

One was acute Dysentery after 19 days in Gaol.

Three were Enteric.

One was ruptured ulcer of intestine followed by Suppurative Peritonitis.

One was Cerebral hæmorrhage due to diseased arteries after 5 years in Gaol.

5. Considering the three facts (1) That about 10,000 individuals of the criminal classes passed through the Gaol in the course of the year; (2) That Typhoid and Tubercle, common diseases in Singapore, are known to be carried by persons who, apparently in perfect health, are yet likely sources of infection to all around them; (3) That the native coolie is quite indifferent to the near presence of night-soil, urine and expectoration, then it is only to be expected that some cases of typhoid tubercle and acute dysentery will occur in the Prison in spite of many extra precautions.

What these are I quote from my report on the Prison for 1906.

(a) Food tins are removed from cells at 4-45 P.M. instead of being left in the cells all night.

(b) Food tins are scalded daily.

(c) Drinking water buckets are scalded daily.

(d) The old drinking water tubs in the workyards are replaced by tubs provided with locked covers and with taps. These are scalded daily.

(e) In the hospital the drinking water is stored in covered zinc drums provided with taps. These are scalded daily.

(f) The opening into the kitchen from the underground drain has been cemented over.

(g) The yams are cleaned by being dropped into boiling water, are thence fished out one by one, and scrubbed with boiling water. Similar precautions are being taken with all other foods likely to be contaminated.

6. *Diarrhœa and Dysentery*.—The following table shows the admissions and deaths during the last four years :—

—	1906.		1907.		1908.		1909.	
	Admis- sions.	Deaths	Admis- sions.	Deaths	Admis- sions.	Deaths	Admis- sions.	Deaths
Diarrhœa ...	263	6	169	...	190	...	212	1
Dysentery ...	205	30	88	5	41	8	66	15

7. *Cholera*.—One case arrived in the Gaol on 26th May with the disease. He recovered and no other cases occurred.

8. *Beri-beri*.—Three prisoners arrived in Prison with the disease. They were treated in the hospital. They all recovered and no other cases occurred. This makes three successive years during which no case has arisen in the Gaol.

9. In addition to the work at the hospital indicated in paragraph 2 a very large number of prisoners is seen daily. Firstly a large party averaging 70, composed of those who have complained of sickness to the Warder at the early morning muster, is seen by the Assistant Surgeon, who sends some to Hospital for observation and treats others as out-patients. Next a party of about fifteen is seen by me. It is composed of prisoners, whom I have ordered to be brought up, so that I may increase or decrease their labour, and see if their diet is good enough or is better than necessary. Thirdly about forty daily of the civil prisoners and vagrants are seen as out-patients by the Assistant Surgeon who sends some to Hospital and treats the others as is required. And during the whole day about 30 other prisoners come out from the workyards pleading inability to work. These too are seen by the Assistant Surgeon whose duty also involves a considerable amount of clerical work.

I wish to put on record the excellent work that has been done by Mr. Assistant Surgeon HALE, who for 16 years has been stationed in the Gaol. He has always shown much kindness, skill and patience in dealing with the very troublesome class of patient, the prisoner, who is or pretending to be sick. In his work he has been ably seconded by Dresser MONTEIRO who for 25 years has been the Dresser in the Prison. They are both shortly retiring and they will be much missed by the staff as well as by the prisoners.

Singapore Gaol.—Table I.

Showing the Death-rate amongst the Criminals to the Average Daily Population of Criminals :—

	Death-Rate.	
	—	
1895	...	10.29
1896	...	6.63
1897	...	2.39
1898	...	1.62
1899	...	2.20
1900	...	4.76
1901	...	3.69
1902	...	4.27
1903	...	4.68
1904	...	5.54
1905	...	3.32
1906	...	7.84
1907	...	2.11
1908	...	1.93
1909	...	2.83

Tan Tock Seng's Hospital.

ANNUAL REPORT 1909 BY DR. GRAY, *Resident Medical Officer.*

1. During the year 1909, 8,403 patients were admitted to the hospital, 455 remained at the end of 1908; the total treated in the wards being therefore 8,858. In addition to these many minor accident cases were treated without admission or in the case of women treated and sent to the Female Pauper Hospital at Kandang Kerbau. Of the total number treated in the wards 6,672 were discharged, 100 absconded, 1,383 died and 446 remained in hospital at the end of the year.

2. The average daily number of patients in the wards was 470·06.

3. The percentage of deaths to total treated was 15·61.

4. The average daily stay of those discharged, died and remaining at the end of 1909 was, respectively, 16·93, 13·47, 70·59 days.

5. *Admissions.*—The number of admissions was 1,719 more than that for 1908 and 874 more than that for 1907.

6. The diseases giving the largest number of admissions were, Malaria, Syphilis, Dysentery, Beri-beri, Injuries, Pneumonia, Enteritis, Enteric Fever and Bright's disease.

7. In addition to the thirteen cases of Cholera developing in the wards in December, 1908, three more occurred in January, 1909, but owing to the quarantining and disinfection of the infected wards the disease did not spread any further.

8. *Malaria.*—Total treated 1,922; 1,870 were admitted during the year.

9. *Syphilis.*—Nine hundred and forty-two were treated; of these ten died. The treatment of these cases only lasts while they are in hospital and as we have not room to keep nor power to compel the patients to stay for two years for complete cure Syphilis is rampant among the coolie class in all its stages.

10. *Dysentery.*—Seven hundred and six cases treated; of these 328 died, giving a death-rate of 46·46 per cent, as compared with 65·40 per cent in the previous year.

11. *Beri-beri.*—Eighty-two cases remained at the end of 1908, 652 were admitted, 96 died; the percentage of deaths to those treated being 13·07. 184 were transferred to the Beri-beri Hospital at Pasir Panjang. Of the total treated 580 were Chinese, the remaining 72 belonging to various nationalities. The Chinese form 88·95 per cent of the cases treated for this disease. The percentage of deaths to those treated 13·07 appears very high but many are brought to the hospital in a dying condition and if we eliminate those who died within 24 and 48 hours, 49 and 9, respectively, the death-rate is only 5·18.

12. *Pulmonary Tuberculosis.*—Three hundred and eight were treated, of these 172 died. The same difficulty as during the previous years was met with, viz.: that the patients leave hospital when the urgent symptoms are relieved. The percentage of deaths to those treated was 55·85, as compared with 67·01 in the previous year.

13. *Enteric Fever.*—Ninety-four were treated; of these 46 died which gives a percentage of 48·93 deaths to those treated, as compared with 56·38 per cent in the previous year. Many of the deaths occurred in cases which were not brought to hospital until the third week of the disease or even later.

14. Out of 8,403 admissions, 1,030 were opium eaters, 670 opium smokers, 13 morphia eaters and 6 morphia injectors.

15. In the table given below the number of admissions for each month is contrasted with that of last year. The deaths are those of total treated in the hospital and the mortality is the percentage to those treated.

MONTH.			Admissions.		Deaths.		Mortality.	
			1908.	1909.	1908.	1909.	1908.	1909.
January	...	...	570	563	90	109	15·79	19·36
February	...	...	502	562	97	91	19·32	16·55
March	...	...	508	655	90	87	17·72	13·28
April	...	...	548	607	106	98	19·56	16·14
May	...	...	525	647	133	112	25·3	17·31
June	...	...	647	682	156	131	24·11	19·20
July	...	...	542	742	155	91	28·41	12·26
August	...	...	579	697	139	119	24·01	17·07
September	...	...	546	740	145	133	26·56	17·97
October	...	...	566	861	117	147	20·69	17·07
November	...	...	594	861	145	140	24·53	16·28
December	...	...	563	786	137	125	22·56	15·90

16. *Discharges.*—Of the 6,672 who were discharged 3,967 are recorded as cured, 2,638 relieved and 67 not improved.

17. *Transfers.*—One hundred and eighty-four Beri-beri patients were transferred to the Pasir Panjang Hospital, 73 men were committed to the Lunatic Asylum.

18. *Deaths.*—There were 1,383 deaths, giving a death-rate of 15·61 per cent as compared with 1,510 deaths and 20·91 per cent in 1908. As in previous years many were brought to hospital in the last stage of disease, and if we exclude those who died within 48 hours of admission the death-rate is 10·55 per cent of all treated.

19. *Surgical Aspect.*—Five hundred and twenty-three operations were in all performed under anæsthetics. Of these, amputations were 38, laparotomy 17, radical cure for hernia 14, trephining of skull 1, resection of ribs 18, radical cure for Hydrocele 18, excision of joints 4, extraction of cataract 1, removal of malignant growths of neck 4, removal of aneurysmal sac (popliteal) 1, radical cure of hæmorrhoids 8, Thiersch's skin-grafting 12, removal of elephantoids scrotum 1, external urethrotomy 11, opening of knee-joint 9, tracheotomy 1, thyroidectomy 1.

In addition to these numerous minor operations were performed without anæsthetics.

20. *Malignant Growth.*—One remained, 25 were admitted, 16 died. The majority of these cases were inoperable on admission.

21. *European Ward.*—The total number treated was 261, deaths 15, giving a percentage of 5·79 to the total treated. Alcoholism, Malaria, Venereal diseases, Pulmonary Tuberculosis, Fistulæ, Enteric Fever, Hydrocele and Hernia were the chief causes of admission to this ward.

The following are the nationalities with the numbers treated:—English 44, Scotch 9, Irish 7, Welsh 1, German 3, French 3, Russian 3, American 4, Canadian 3, Dutch 2, Portuguese 3, Spanish 2, Danish 4, Swiss 2, Italian 2, Greek 3, Europeans not

differentiated 7, Armenian 2, Australian 2, Ceylonese 9, Egyptian 1, Eurasian 86, Goanese 4, Japanese 31, Jew 6, Philippino 2, Mexican 1, Turk 1, West Indian 1.

22. *Medico-legal*.—Five hundred and eleven cases were sent by the Police, 81 bodies were sent by the Coroner for post-mortem examination, in addition many inquests were held on accident cases treated in the wards.

23. *Visitors*.—The Principal Civil Medical Officer made 47 visits, His Excellency the Governor 1, the Colonial Secretary 1, and the Members of the Committee 11.

24. *Personnel*.—Dr. H. J. GIBBS was in charge until 12th August, when I took over the hospital from him. Messrs. HOGAN, SEN, SINHA, GHOSAL, D'CRUZ, MEHTA and APPADURAI were attached as Assistant Surgeons during the year at different periods and have done good work.

On the 21st April the hospital was transferred to the new site on the Moulmein Road which compares more favourably with the old site. It is situated at the top of a hill and therefore is well drained. The wards also are built on a solid foundation and being on a hill-top are more airy and therefore in every way more hygienic. To the situation of the hospital we attribute to some extent the all round reduction of the death-rate as compared with the previous years especially in Phthisis and Dysentery.

Leper Asylum.

Ten males and 20 females remained at the end of 1908. 48 males and 7 females admitted during the year 1909. 27 males were transferred to the Leper Asylum at Pulau Jerejak. 3 males absconded and 9 males and 3 females died during the year.

Quarantine Camp.

Six patients remained at the beginning of the year and 126 were admitted.

Thirty-two died, three absconded and one remained at the end of the year.

The European portion was completely renovated and the native small-pox hospital ward was refloored and several window-frames were replaced.

Lunatic Asylum.

REPORT BY Dr. H. J. GIBBS, *Medical Superintendent*.

1. The average number of patients resident during the year was 344 (males 281, females 63), an increase of 18 as compared with that of the previous year.

2. On the 31st December, 1908, there remained 336 patients (males 279, females 57). There were admitted in 1909 males 174, females 46, making a total treated of 556 (453 males and 103 females).

3. The maximum and minimum daily numbers in the Asylum were, respectively, 362 and 320.

4. Of the 351 patients remaining on the 31st December, 1909:—

Males. Females.

—	—				
175	42	...	...	came from	Singapore.
67	17	...	...	"	Penang.
7	2	...	...	"	Malacca.
25	5	...	...	"	Province Wellesley.
1	—	...	...	"	Selangor.
2	—	...	...	"	Seremban.
1	1	...	...	"	Johore.
2	—	...	...	"	British North Borneo.
4	—	...	...	"	Labuan.

5. There were under treatment on 31st December, 1908, 13 criminal lunatics and 9 lunatic criminals, 4 criminal lunatics and 3 lunatic criminals were admitted in 1909 making a total of 29 criminals treated during the year. Of these 6 have been discharged recovered, 2 have died, the sentence of 1 has expired and 20 remained under treatment.

6. Evidence of past and present venereal disease, mainly past, in the admissions was, as in the previous years, common. Over 20 per cent of those admitted were so effected.

7. There were 14 cases of alcoholic insanity admitted. 10 of them were of a similar description to the cases described in last year's annual report.

8. There were 8 abscondments (6 males and 2 females). Of the male abscondments the majority had practically recovered and were impatient of discharge. The females had shown some improvement.

9. Two patients with old scars, the result of previous morphia hypodermic injections, were amongst the admissions, but as neither of the patients had been addicted for years to the habit, their insanity was clearly due to causes other than morphia.

10. During the year under report there were 74 cases of Dysentery and 23 of Diarrhœa, 28 of the 74 Dysentery cases died giving a mortality rate of 37·84.

11. *Cholera*.—An elderly Chinese patient named GEE WAN absconded on the 7th January and was brought back on the night of the 9th by one of our Chinese attendants who saw him in the streets. He developed Cholera at 3 A. M. of the 14th and died the next morning. On his return to the Asylum he was segregated as are all new Chinese admissions. No other cases occurred.

12. *Casualties*.—There were 75 casualties amongst the patients, mostly of a trifling nature. Seven were inflicted by other patients, 22 by themselves and 46 were the result of accidents. Amongst the 75 were 3 serious cases.

- (1) A case of Suppurative Peritonitis following a kick on the abdomen by another patient.
- (2) An intracapsular fracture of the neck of right femur.
- (3) Fracture of base of skull.

These latter being the result of accidental falls.

13. I regret to have also to record the following three serious incidences in connection with the Asylum during the year:—

- (a) The suicide by hanging of one of our Chinese attendants. He had taken over duty at J, K, L and M blocks at 5-30 P. M. on the 14th October and was noticed to be restless, walking about in an aimless manner between these blocks and the dhoby shed. He was missed at 7-30 P. M. and searched for. On examining his room he was found dead hanging by a piece of rope from the window. Artificial respiration was tried with no success. He was said to be in debt and this was the only discoverable cause for his act.
- (b) Attendant AHMAT who at 6-45 A. M. on the 13th July was in charge of a cleaning party of 15 patients in the association ward was struck by a Chinese criminal lunatic named AH HONG on the right side of his head with a broken iron trestle which fractured his right parietal and temporal bones. AHMAT was at once removed to the General Hospital and trephined. He died at 2 P. M. AH HONG stated at the inquest that he had no feeling of ill-will against the attendant, but he heard a voice telling him to strike. He has been an inmate of the Asylum since 21st March, 1907, and, during the earlier portion of his stay, was considered a dangerous and violent patient owing to his having assaulted the Assistant Surgeon and the senior native attendant, but for months previous to his attack upon AHMAT he had given no trouble and had worked in the association blocks under various native attendants quite satisfactorily.

(c) A convalescent Malay patient named BERET escaped from Pasir Panjang on the 2nd June, 1909. While in hiding he relapsed and developed the delusion that his father-in-law was the possessor of an evil spirit in the shape of a large ape, and that this relative had sent the ape to kill a child of his two years ago; he having seen the marks of the monkey's paws on the body of his dead child. On the 7th June he had the delusion that the old man had sent the ape to kill him and that while asleep that evening he was roused by the ape trying to throttle him; grasping an axe he gave chase, as he thought, the ape which entered the old man's hut. BERET followed and, mistaking the old man for the ape, killed him. At the enquiry held in the Police Court he was found to be too insane to plead and was subsequently, on an order from His Excellency the Governor, sent to the Asylum.

14. Four determined attempts at suicide were frustrated by the vigilance of the attendants.

15. *Admissions.*—Of the 174 males and 46 females

<i>Males. Females.</i>						
—	—					
126	35	...	...	...	came from Singapore.	
20	5	...	...	...	,, ,, Penang.	
3	3	...	...	...	,, ,, Malacca.	
11	1	...	...	...	,, ,, Province Wellesley.	
1	—	...	...	...	,, ,, Johore.	
1	—	...	...	...	,, ,, Labuan.	
2	—	...	...	...	,, ,, Selangor.	
—	2	...	...	...	,, ,, Seremban.	

16. The causes assigned for the mental breakdown of the above admissions are shown in Tables X-*a*. Although 32 cases have venereal diseases assigned as possible causes of their insanity it is questionable if this were so in more than three.

17. In 77 of the admissions no cause could be assigned.

18. *Discharges.*—Ninety-three patients were discharged recovered giving a recovery rate of 42·27 per cent on the admissions which is a decided improvement on the 1908 rate and, though comparing favourably with the rates for most of the other years, falls short of 1902 by 14·33 per cent.

19. *Deaths.*—Sixty-five males and 13 females died in 1909, giving a percentage of 22·67 on the average daily number resident and of 14·03 on the total treated.

20. The average duration of the males who died was 2 years, 1 month, 11 days, that for the females was 2 years, 3 months and 11 days.

21. Table VI shows the duration of stay in the Asylum of those who died during the year.

22. Dysentery and Pulmonary Tuberculosis account for 46 of the deaths, giving a percentage of 58·98. The overcrowded state of the Asylum is largely responsible for the prevalence of both of these diseases. More accommodation is urgently needed, both for sick and for those who are physically well.

23. There were remaining in the Asylum on the 31st December, 1909 :—

		<i>Males. Females.</i>	
		—	—
British	...	3	0
Eurasian	...	8	2
Japanese	...	1	0
Jew	...	1	0
Malays	...	10	7
Tamils	...	19	8
Bengalis	...	0	0
Bombay	...	1	0

				Males.	Females.
				—	—
Cingalese	...	...	...	1	0
Javanese	...	...	...	1	4
Dutch	...	...	...	0	1
German	...	...	...	1	0
Siamese	...	...	...	1	1
Arab	...	...	...	1	0
Jawipakan	...	...	...	0	1
<i>Chinese :—</i>					
Hokkien	...	...	...	89	8
Teochew	...	...	...	42	6
Cantonese	...	...	...	34	27
Kheh ...	...	...	...	35	2
Hylam ...	...	...	...	27	0
Lui Chu	...	...	...	7	0
Kow Chew	...	...	...	2	0
				—	—
				284	67
				—	—

24. *Industries.*—During the year 6,096 yards of cloth have been woven from which have been made 67 jackets and 75 trousers for European and Eurasian patients; 118 jackets and 1,081 trousers for native male patients; 173 jackets and 258 sarongs for female patients; 6 mattress covers, 120 dusters and 12 pillow cases.

25. Sail canvas has been purchased and converted by the patients into 14 combination suits and 29 strong rugs. 16 cotton blankets were woven.

26. *General.*—Revenue derived from paying patients amounts to \$3,506.02, sale of stores, etc., produced \$56.50.

27. The monthly cost of maintenance per head has been \$11.08 in comparison with \$11.74 in 1908.

28. *Staff.*—Dr. ELLIS, who had been Medical Superintendent since October, 1888, was in charge throughout the year and handed over charge to me on the 31st December.

29. The Assistant Surgeon, Matron, and the majority of the subordinate staff have served throughout the year.

30. A new European attendant came out from England towards the latter end of 1909.

31. The usual tables, viz., I, II, III, IV, V, VI, X-a, X-b, X-c, XI and XII of the English Commissioners are appended.

TABLE I.

LUNATIC ASYLUM.

Table showing the Admissions, Discharges and Deaths during the Year 1909.

—	Male.	Female.	Total.	Male.	Female.	Total.
In the Asylum on 1st January, 1909	...	...	...	279	57	336
Cases admitted :—						
First Admissions	154	43	197	...	...	...
Not First Admissions	20	3	23	174	46	220
						24
Total Cases under care during the year	...	...	...	453	103	556
Cases Discharged :—						
Recovered	77	16	93	...	...	...
Relieved	17	5	22	...	...	...
Not Relieved	4	...	4	...	...	...
Absconded	6	2	8	...	...	...
Died	65	13	78	...	...	...
Total Cases Discharged and Died during the year	...	...	...	169	36	205
Remaining in the Asylum on 31st December, 1909	...	...	...	284	67	351
Average number resident during the year	...	...	...	281	63	344

TABLE II.
LUNATIC ASYLUM.

Table showing the Admissions, Re-admissions, Discharges and Deaths from 31st December, 1888, to 31st December, 1909.

—	Male.	Female.	Total.	Male.	Female.	Total.
Remaining on the 31st December, 1888 ...	...	...	...	176	32	208
Persons admitted during the period ...	...	...	...	3,278	554	3,832
Re-admissions ...	...	...	...	348	70	418
Total Cases treated ...	...	...	...	3,802	656	4,458
Discharged Cases:—						
Recovered ...	1,520	202	1,722	...	...	...
Relieved ...	377	93	470	..	...	...
Not Improved ...	110	39	149	...	...	...
Absconded ...	115	19	134	...	...	...
Died ...	1,396	236	1,632	...	...	...
Total Cases Discharged and Died since 31st December, 1888 ...	...	...	...	3,518	589	4,107
Remaining in Asylum on 31st December, 1909 ...	...	...	...	284	67	351

TABLE III.

LUNATIC ASYLUM.

Table showing the Admissions, Discharges and Deaths, with the Mean Annual Mortality and Proportion of Recoveries per cent on the Admissions for the Years 1886 to 1909 inclusive.

YEAR.	Admitted.		Discharged.						Absconded.			Died.			Remaining on 31st December of each Year.			Average Number Resident.			Percentage of Recoveries on Admissions.			Percentage of Deaths on the Average Number Resident.			
	Male.	Female.	Recovered.			Relieved.			Not Improved.			Total.			Total.			Total.			Total.			Total.			
			Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
1886	...	164	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	33.52
1887	173	190	...	59	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.81
1888	153	176	35	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25.00
1889	186	210	67	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.14
1890	224	254	87	94	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38.18
1891	162	192	61	74	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23.40
1892	158	187	71	85	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31.82
1893	184	217	65	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.20
1894	169	198	69	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20.97
1895	173	207	70	86	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30.77
1896	202	230	86	102	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28.26
1897	122	148	62	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.00
1898	137	161	61	68	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19.15
1899	130	162	51	63	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19.23
1900	157	187	54	59	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16.98
1901	154	175	74	84	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	57.69
1902	143	159	82	90	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21.52
1903	191	221	70	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.09
1904	223	254	90	104	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22.44
1905	200	228	101	106	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20.00
1906	199	231	85	96	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27.08
1907	163	197	80	88	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.88
1908	175	212	57	64	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20.40
1909	174	220	77	93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32.78
																											20.63
																											22.67

TABLE IV.

LUNATIC ASYLUM.

Table showing the History of the Annual Admissions since 1889, with the Discharges and Deaths, and the Number of each Year Remaining on 31st December of the Year reported on.

YEAR.	Admitted.				Of each Year's Admissions, Discharged and Died in 1909.												Total Discharged and Died of each Year's Admissions to 31st December, 1909.												Remaining of each Year's Admissions, 31st December, 1909.		
	New Cases.		Re-admissions.		Recovered.		Relieved.		Not Improved.		Absconded.		Died.		Recovered.		Relieved.		Not Improved.		Absconded.		Died.								
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.				
Prior to 1889	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6					
1889	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1					
1890	197	26	27	4	254	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1					
1891	137	25	25	5	192	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1892	144	26	14	3	187	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1893	170	27	14	6	217	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1894	157	24	12	5	198	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1895	156	30	17	4	207	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1896	186	21	16	7	230	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1897	98	21	24	5	148	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1898	129	21	8	3	161	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1899	118	30	12	2	162	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1900	143	29	14	1	187	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1901	137	21	17	...	175	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1902	129	14	14	2	159	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1903	176	27	15	3	221	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1904	201	24	22	7	254	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1905	177	26	23	2	228	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1906	176	30	23	2	231	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1907	148	29	15	5	197	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1908	167	34	8	3	212	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
1909	154	43	20	3	220	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					

TABLE V.
LUNATIC ASYLUM.
Showing the Causes of Deaths during the Year 1909, together with the Ages at Deaths.

CAUSES OF DEATH.	Under 15 years.		15 and under 20 years.		20 and under 25 years.		25 and under 30 years.		30 and under 35 years.		35 and under 40 years.		40 and under 45 years.		45 and under 50 years.		50 and under 55 years.		55 and under 60 years.		60 and under 65 years.		65 and under 70 years.		70 and under 75 years.		75 and under 80 years.		TOTAL.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
INFECTIVE DISEASES.—																														
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malaria, Pernicious Tertian	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CERTAIN MORBID CONDITIONS.																														
Ankylostomiasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
NERVOUS SYSTEM. DISEASE OF BRAIN AND MEMBRANES.—																														
Meningitis, Acute diffuse	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Organic disease of the brain	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
NERVOUS DISORDERS AND DISEASES OF UNDETERMINED NATURE.—																														
Hemiplegia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
MENTAL DISEASES.—																														
Mania, acute (exhaustion from)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mania, acute delirious	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carried over	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	53	12	65																											

TABLE V.—Continued.

LUNATIC ASYLUM.

Showing the Causes of Deaths during the Year 1909, together with the Ages at Deaths.

CAUSES OF DEATH.	Under 15 years.		15 and under 20 years.		20 and under 25 years.		25 and under 30 years.		30 and under 35 years.		35 and under 40 years.		40 and under 45 years.		45 and under 50 years.		50 and under 55 years.		55 and under 60 years.		60 and under 65 years.		65 and under 70 years.		70 and under 75 years.		75 and under 80 years.		TOTAL.				
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.			
<i>Brought forward</i> ..	...	...	1	2	3	2	2	9	1	10	12	5	17	5	2	7	9	...	9	5	...	5	6	...	6	1	1	2	...	1	53	12	65
DISEASES OF THE CIRCULATORY SYSTEM.—																																	
Valvular Disease of the Heart (Mitral) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
Ditto (aortic) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
DISEASES OF THE BLOOD VESSELS.—																																	
Aneurism of the Aorta ...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
DISEASES OF THE DIGESTIVE SYSTEM.—																																	
Perforation of intestine ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
Suppurative Peritonitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	3	1	4	
DISEASES OF THE URINARY SYSTEM.—																																	
Acute Parenchymatous Nephritis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
Chronic Interstitial Nephritis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	
Pyelo-Nephritis ...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	
DISEASES OF THE CONNECTIVE TISSUE.—																																	
Diffuse cellulitis ...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
TOTAL ...	...	...	1	2	3	2	1	3	10	1	11	14	5	19	7	2	9	11	...	8	...	2	1	1	2	...	1	...	...	65	13	78	

TABLE VI.

LUNATIC ASYLUM.

Table showing the Length of Residence of those Discharged, Recovered and of those who Died, during the Year 1909.

Length of Residence.				Recovered.			Died.		
				Male.	Female.	Total.	Male.	Female.	Total.
Under one month	...	...	...	5	1	6	12	...	12
From one to three months	...	...	...	25	2	27	10	4	14
„ three to six months	...	...	...	23	7	30	7	...	7
„ six to nine months	...	...	...	11	1	12	5	3	8
„ nine to twelve months	...	...	...	7	2	9	3	...	3
„ one to two years	...	...	...	4	3	7	10	2	12
„ two to three years	...	...	...	2	...	2	5	1	6
„ three to five years	...	...	...	...	...	...	7	1	8
„ five to seven years	...	...	...	...	...	...	3	...	3
„ seven to ten years	...	...	...	...	...	...	1	1	2
„ ten to fifteen years	...	...	...	...	..	...	...	1	1
„ fifteen to twenty-five years	...	...	...	...	...	...	2	...	2
TOTAL				77	16	93	65	13	78

TABLE X-a.
LUNATIC ASYLUM.

Table showing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges and Deaths of the Year 1909.

CAUSES.	ADMISSIONS.											
	Number of Instances in which a Cause was Assigned.											
	Admissions :—Male 174. Female 46. Total 220.											
	As Predisposing Cause.			As Exciting Cause.			As Predisposing or exciting Cause. *			Total. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends)	...	...	...	2	...	2	...	...	...	2	...	2
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	...	...	...	2	...	2	...	...	...	2	...	2
Mental Anxiety and Worry and Overwork ...	...	...	...	...	...	...	...	...	...	...	...	...
Religious Excitement	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	...	...	...	...	...	...	...	...	...
Fright and Nervous Shock	...	...	...	...	...	...	...	...	...	...	...	...
<i>Physical.</i>												
Intemperance in Drink	...	...	...	13	1	14	...	...	...	13	1	14
Venereal Disease	24	5	29	2	1	3	...	...	...	26	6	32
Self-abuse	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke	...	...	...	...	...	...	...	...	...	...	...	...
Accident or Injury	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...
Parturition and the Puerperal State ...	...	...	...	...	1	1	...	...	...	...	1	1
Uterine and Ovarian Disorders	...	...	...	...	...	...	...	...	...	...	...	...
Lactation	...	...	...	...	...	...	...	...	...	...	...	...
Puberty	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	...	...	...	...	...	...	4	1	5	4	1	5
Privation and Starvation	...	...	...	...	...	...	...	...	...	...	...	...
Heart Disease	1	...	1	3	...	3	33	3	36	37	3	40
Phthisis	8	6	14	2	...	2	2	...	2	12	6	18
Malarial Fever	...	...	...	18	...	18	...	...	...	18	...	18
Typhoid Fever	...	...	...	1	...	1	...	...	...	1	...	1
Other Bodily Diseases or Disorders ...	5	3	8	1	...	1	...	...	...	6	3	9
Previous Attacks	24	4	28	...	...	...	...	...	...	24	4	28
Old Age	4	...	4	...	...	...	...	...	...	4	...	4
Morphia Habit	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences ascertained ...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Defect	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking	...	...	...	...	...	...	...	...	...	...	...	...
Unknown	...	...	...	...	...	...	...	...	...	57	20	77

* Where these could not be distinguished. † Some of the admissions are credited with more than one cause; therefore, the sum of the "known" and "unknown" causes exceeds that of the admissions.

TABLE X-b.

LUNATIC ASYLUM.

Table showing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges and Deaths of the Year 1909.—Continued.

CAUSES.	DISCHARGES.											
	Number of Instances in which a Cause was Assigned.											
	Discharges :—Male 98. Female 21. Total 119.											
	As Predisposing Cause.			As Exciting Cause.			As Predisposing or Exciting Cause.*			Total. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends)	...	...	...	2	...	2	...	...	...	2	...	2
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	...	...	...	1	...	1	...	...	...	1	...	1
Mental Anxiety and Worry and Overwork ...	...	...	...	1	...	1	...	...	...	1	...	1
Religious Excitement	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	1	...	1	...	...	...	1	...	1
Fright and Nervous Shock	...	...	...	...	...	...	...	...	...	...	...	...
<i>Physical.</i>												
Intemperance in Drink	...	...	...	17	1	18	...	...	...	17	1	18
Venereal Disease	...	...	...	1	...	1	5	...	5	6	...	6
Self-abuse	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke	...	...	...	...	...	...	...	...	...	...	...	...
Accident or Injury	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...
Parturition and the Puerperal State ...	...	...	...	...	...	...	...	...	...	...	...	...
Uterine and Ovarian Disorders	...	...	1	1	...	...	...	...	...	...	1	1
Lactation	...	...	...	...	...	...	...	...	...	...	...	...
Puberty	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	...	...	...	...	...	...	2	...	2	2	...	2
Privation and Starvation	...	...	...	...	...	...	...	...	...	...	...	...
Heart Disease	13	1	14	...	...	...	...	...	...	13	1	14
Phthisis	1	...	1	...	...	...	...	...	...	1	...	1
Malarial Fever	...	...	...	28	1	29	...	...	...	28	1	29
Typhoid Fever	...	...	...	...	...	...	...	...	...	...	...	...
Other Bodily Diseases or Disorders ...	4	2	6	...	...	...	...	...	...	4	2	6
Previous Attacks	20	4	24	...	...	...	...	...	...	20	4	24
Old Age	1	...	1	...	...	...	...	...	...	1	...	1
Morphia Habit	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences ascertained ...	3	...	3	...	...	...	...	...	...	3	...	3
Congenital Defect	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking	...	...	...	1	...	1	...	...	...	1	...	1
Unknown	...	...	...	...	...	...	...	...	...	27	13	40

* Where these could not be distinguished. † Some of the discharges are credited with more than one cause; therefore, the sum of the "known" and "unknown" causes exceeds that of the discharges.

TABLE X-c.

LUNATIC ASYLUM.

Table showing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges and Deaths of the Year 1909.—Concluded.

CAUSES.	DEATHS.											
	Number of Instances in which a Cause was Assigned.											
	Deaths:—Male 65. Female 13. Total 78											
	As Predisposing Cause.			As Exciting Cause			As Predisposing or Exciting Cause. * ^g			Total. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends)	...	...	...	...	...	...	...	...	...	...	...	...
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	...	...	...	...	...	...	...	...	...	...	...	...
Mental Anxiety and Worry and Overwork ...	...	...	...	...	...	...	...	...	...	...	...	...
Religious Excitement	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	...	...	...	...	...	...	...	...	...
Fright and Nervous Shock	...	...	...	...	...	...	...	...	...	...	...	...
<i>Physical</i>												
Intemperance in Drink	...	...	...	...	...	...	...	...	...	...	...	...
Venereal Disease	...	...	...	...	...	...	10	2	12	10	2	12
Self-abuse	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke	...	...	...	...	...	...	...	...	...	...	...	...
Accident or Injury	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...
Parturition and the Puerperal State ...	...	...	...	...	...	...	...	...	...	...	...	...
Uterine and Ovarian Disorders	...	...	...	...	...	...	...	...	...	...	...	...
Lactation	...	...	...	...	...	...	...	...	...	...	...	...
Puberty	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	...	...	...	...	...	...	2	1	3	2	1	3
Privation and Starvation	...	...	...	...	...	...	...	...	...	...	...	...
Heart Disease	...	1	1	...	...	...	6	...	6	7	...	7
Phthisis	...	18	5	23	...	...	...	...	...	18	5	23
Malarial Fever	...	...	...	...	1	1	...	...	...	...	1	1
Typhoid Fever	...	...	...	...	1	1	...	...	...	1	...	1
Other Bodily Diseases or Disorders ...	...	7	...	7	1	1	...	...	...	8	...	8
Previous Attacks	...	4	...	4	...	...	...	...	...	4	...	4
Old Age	...	3	1	4	...	...	...	...	...	3	1	4
Morphia Habit	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Defect	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking	...	...	...	...	...	...	...	...	...	...	...	...
Unknown	...	...	...	...	...	...	...	...	...	20	7	27

* Where these could not be distinguished. † Some of the deaths are credited with more than one cause; therefore, the sum of the "known" and "unknown" causes exceeds that of the deaths.

TABLE XI.

LUNATIC ASYLUM.

Showing the Form of Mental Disorder on Admissions and Deaths of the Year 1909, and the Form of Mental Disorder of the Inmates on 31st December, 1909.

FORM OF MENTAL DISORDER.	Admitted.			Recoveries.			Deaths.			Remaining in Asylum.		
	Male.		Total.	Male.		Total.	Male.		Total.	Form of Mental Disorder, 31st December, 1909.		Total.
	Male.	Female.		Male.	Female.		Male.	Female.		Male.	Female.	
Congenital or Infantile Deficiency with Epilepsy	...	...	...	...	...	...	...	...	...	...	...	...
Do. do. without Epilepsy	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy acquired	1	1	2	...	...	...	...	...	...	8	1	9
General Paralysis of the Insane	3	1	4	...	...	...	2	...	2	5	2	7
Mania, Acute	3	...	3	...	...	...	...	...	...	2	1	3
Do. Acute Delirious	120	18	138	55	10	65	38	6	44	32	6	38
Do. Chronic	...	1	1	...	1	1	...	...	...	...	...	...
Do. Recurrent	3	1	4	1	1	2	2	...	2	5	4	9
Do. A Potu	4	...	4	4	...	4	2	...	2	4	2	6
Do. Puerperal	...	1	1	...	...	...	...	...	...	...	...	...
Do. Senile	2	...	2	...	...	...	...	...	...	...	1	1
Melancholia, Acute	12	7	19	7	4	11	1	...	1	...	...	...
Do. Chronic	1	...	1	1	...	1	7	1	8	7	2	9
Do. Recurrent	...	...	...	...	...	...	...	...	...	8	...	8
Do. A Potu	...	...	...	...	...	...	...	...	...	...	...	...
Do. Puerperal	...	...	...	...	...	...	...	...	...	...	...	...
Do. Senile	...	...	...	...	...	...	...	...	...	...	...	...
Delusional Insanity	9	2	11	3	...	3	...	...	...	...	...	...
Dementia, Primary	2	1	3	...	...	...	1	...	1	9	4	13
Do. Secondary	13	8	21	...	...	...	10	3	13	3	1	4
Do. Senile	...	...	...	...	...	...	...	...	...	199	39	238
Do. Organic...	...	4	4	...	...	...	...	2	2	...	...	...
Not Insane on Admission	1	...	1	1	...	1	...	...	...	...	...	...
Convollescent	...	...	...	...	...	...	...	...	...	2	4	6
TOTAL	174	46	220	77	16	93	65	13	78	284	67	351

TABLE XIII.

LUNATIC ASYLUM.

Showing Occupation of Admissions.

Occupation.	Male.	Female.	Total.	Occupation.	Male.	Female.	Total.
Architect and designer ...	1	...	1	<i>Brought forward</i> ...	105	26	131
Actress ...	...	1	1	Pig-breeder ...	1	...	1
Barber ...	1	...	1	Planter, Pepper ...	1	...	1
Beggar ...	2	1	3	„ Tapioca ...	1	...	1
Bill Collector ...	1	...	1	„ Tobacco ...	1	...	1
Blacksmith ...	1	...	1	„ Paddy ...	1	...	1
Boatman ...	1	...	1	„ Vegetable ...	3	...	3
Carpenter ...	5	...	5	„ Pineapple ...	1	...	1
Cart Driver ...	3	...	3	Police Constable ...	2	...	2
Clerk ...	9	...	9	Prostitute ...	...	3	3
Chemist ...	1	...	1	Servant, domestic ...	2	...	2
Cook ...	6	1	7	Seamstress ...	...	3	3
Coolie, General ...	40	1	41	Stoker ...	1	...	1
„ Jinrikisha ...	5	...	5	Sailor ...	1	...	1
Engineer ...	3	...	3	Surveyor's computer ...	1	...	1
Fisherman ...	3	...	3	Tailor ...	4	...	4
Gardener ...	4	...	4	Tin Miner ...	3	...	3
Grass-cutter ...	2	...	2	Washerwoman ...	...	1	1
Hawker ...	15	...	15	Weaver ...	1	...	1
Helmsman ...	1	...	1	Winchman ...	1	...	1
Housewife ...	...	20	20	Woodcutter ...	2	...	2
Inmates of the Poh Leung Kuk ...	...	2	2	Unknown ...	42	13	55
Painter ...	1	...	1	TOTAL ...	174	46	220
<i>Carried forward</i> ...	105	26	131				

Beri-beri Hospital.

REPORT BY DR. W. GILMORE ELLIS, *Physician-in-charge*.

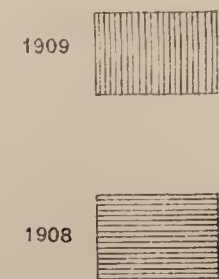
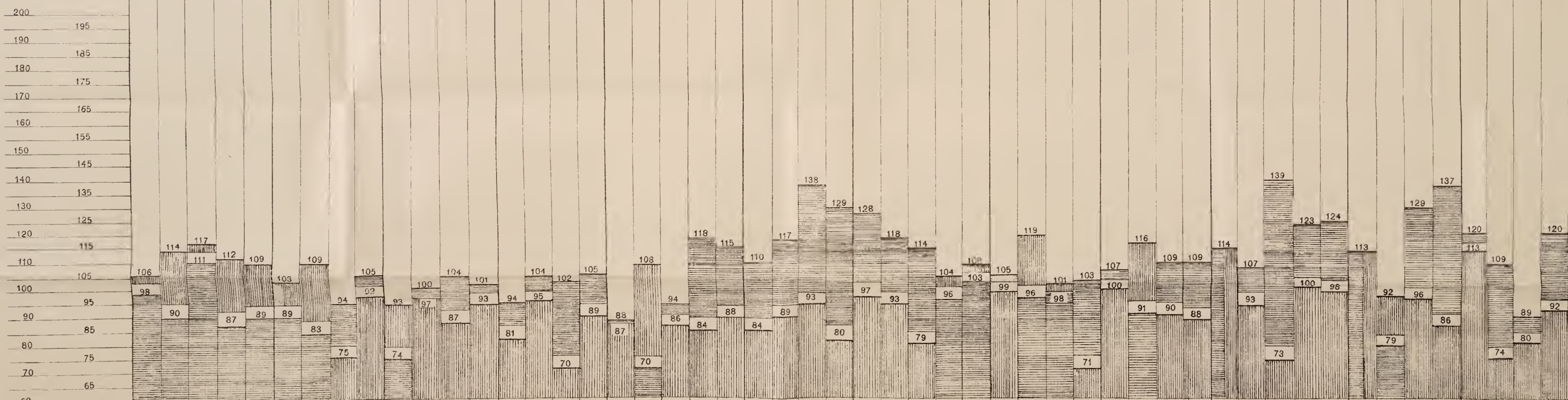
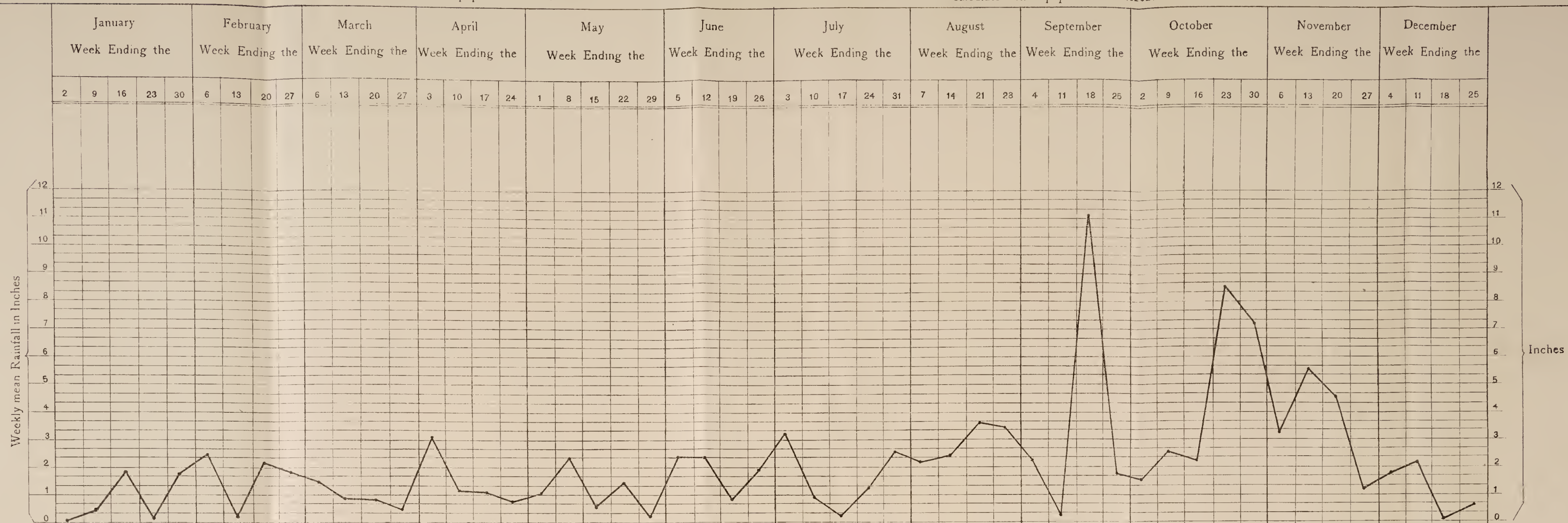
1. On the 31st December, 1908, there remained 112 patients, 271 were admitted during the year, making the total treated 383 as compared with 453 for the previous year.
2. Of these, 181 were discharged recovered, 69 were discharged improved, 4 were discharged not improved, 3 absconded, 7 died, and 119 remained under treatment at the end of the year.
3. Of those dying but one died from Beri-beri. The causes of death in the remaining 6 being Chronic Diarrhoea 2, Pulmonary Tuberculosis 1, Heart disease 1, Fracture of skull from accidental fall 1, Suicide by creasol poisoning 1.
4. It may be interesting to record that the knee jerks had returned in 28 and were absent in 97 of the last 125 patients discharged recovered.
5. There are 11 patients with over 12 months' residence, the oldest patient having been admitted on 14th April, 1907. In these very chronic cases, all of whom were admitted with complete paraplegia, atrophy of the legs, ankle drop and in many instances wrist drop, a considerable period of time has to elapse before recovery. Of these 11 cases 7 are now able to walk a little without assistance, the remaining 4 with the aid of a stick. In 6 the knee jerks are still absent, in the other 2 some slight response can be elicited and these 2 are steadily recovering. I have already chronicled a case in which a patient who had been paralysed for nearly three years was beginning to walk once more when he developed acute dysentery and died. Post-mortem new nerve fibres were seen running through the sheaths of old degenerated peroneal nerves.
6. There were no relapses and but one death from Beri-beri in 383 treated. The abolition of uncured rice as food and the good hygienic surroundings prevailing must be credited with this success.

APPENDIX B.

Penang.

REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer*.

1. *Birth-rate*.—The births in the Settlement during 1909 show a decrease of 700 as compared with 1908 being 6,755, 3,416 males and 3,339 females. Of this number 2,706, 1,356 males and 1,350 females were registered in Penang Island alone. With an estimated population of 260,488, this shows a birth-rate of 25.93 per mille, compared with 28.78 per mille in 1908 and 24.10 per mille in 1907.
2. *Death-rate*.—The number of deaths recorded was 9,061, 6,102 males and 2,957 females as compared with 9,616 deaths in 1908 and 8,136 in 1907. The death-rate for the year on the estimated population given above was 34.78 per mille, compared with 37.12 for the previous year. The death-rate for Penang Island alone was 37.44 per mille, against 43.12 in 1908 and 36.13 in 1907.
3. *Public Health*.—The general health of the Settlement judging by the statistics given above, although it shows an improvement on previous years, cannot be regarded as quite satisfactory. The decrease in the number of deaths is to some extent discounted by the large decrease in the number of births recorded, infant mortality among natives being so high. The average death-rate for the five years previous to 1909 was 35.59.
4. The following table gives the chief causes of death in Penang Island during the past five years. Contrasting the figures for 1908 and 1909 a decrease is shown in



Death Rate Mille	
Corrected Rural Districts	33.38 41.72 31.71 48.40 40.05 35.04 43.39 16.69 35.04 31.71 26.70 38.38 23.36 38.71 41.72 16.69 33.38 16.69 23.36 23.36 26.70 38.38 20.02 20.02 30.04 30.04 26.70 28.37 26.70 40.05 35.04 41.72 41.72 30.04 30.04 30.04 28.37 36.71 38.38 40.05 36.71 28.37 30.04 28.37 35.04 28.37 40.05 30.04 41.72 16.69 31.71 23.36
Crude Pinang Island	41.23 44.34 45.51 43.56 42.40 40.06 42.40 29.17 35.78 36.71 37.73 33.84 36.17 31.30 36.95 27.23 34.62 33.84 42.01 33.45 32.67 34.23 32.67 34.62 36.17 31.11 37.73 36.17 30.73 40.45 42.01 38.37 46.29 39.28 27.61 38.90 46.12 35.01 34.23 44.34 36.17 28.39 38.90 38.12 43.95 35.78 37.34 33.45 43.95 28.78 31.11 35.78
Corrected Municipal	41.55 41.55 43.60 39.59 40.01 38.58 38.93 28.72 33.45 34.88 40.01 30.18 36.93 29.29 34.88 25.24 33.35 36.42 46.17 33.85 33.45 33.45 33.45 33.45 33.45 29.75 38.47 34.88 28.72 38.47 40.01 35.91 44.63 36.93 23.59 33.45 48.22 30.26 25.21 35.39 32.37 25.13 37.96 35.91 36.42 34.88 30.78 29.78 33.45 29.24 30.26 37.44



all the totals for the latter year with the exception of a small rise in the number of deaths due to convulsions.

Principal Causes of Deaths, Penang Island only.

Causes of Deaths.	1904.	1905.	1906.	1907.	1908.	1909.	Died in Hospital 1909.
Phthisis	604	626	674	641	917	901	148
Malarial Fever	344	661	677	526	820	712	58
Beri-beri	307	291	282	212	534	399	31
Fever (not specified)	1,111	608	500	453	444	432	..
Dysentery	161	222	394	289	314	280	147
Convulsions	300	445	343	382	280	313	1
Tetanus (Infantile)	...	...	44	52	137	46	...
Diarrhœa	377	323	251	211	133	65	37

These returns, however, except when they are certified by medical men, cannot be regarded as quite accurate.

5. The deaths from Beri-beri as compared with 1908 show a decrease of 135. In Government institutions where parboiled rice is exclusively used no case has occurred among the inmates during the year. In the Municipal area the deaths from Beri-beri show a decrease from 488 in 1908 to 357 in 1909.

6. Malarial Fever shows a decrease from 820 deaths in 1908 to 712 in 1909. In Municipal limits alone there is a decrease in the number of deaths due to this disease from 746 in 1908 to 654 in 1909.

7. *Infantile Mortality.*—One thousand and forty-three deaths occurred in children under five years of age, of which 475 were of infants 3 months old or under. Tetanus and convulsions accounted for 359 of those deaths (138 being within Municipal limits in 1909 and 193 in 1908), against 417 deaths from these diseases in 1908.

8. The chart accompanying this report represents the number of deaths each week, compared with the corresponding number of deaths in 1908. The rainfall for each month is also shown.

9. *General Diseases.*—The admissions to the various hospitals in Penang and the Dindings were 6,870, against 7,179 in 1908 and 6,804 in 1907. The admissions as compared with 1908 show a decrease for Malaria of 80, Beri-beri of 101, Diarrhœa of 34 and Venereal Diseases of 54, whilst an increase is shown of cases for Dysentery of 33 and for Phthisis of 51.

10. The Out-door Dispensaries at Penang, Balik Pulau and Lumut show a total of 9,038 persons treated, against 7,957 in 1908.

11. *General.*—Dr. FRY, Acting Senior Medical Officer, Penang, was in charge of this department until his transfer to the Federated Malay States early in April, and Dr. KEUN, Medical Officer, District Hospital, was in temporary charge until my arrival from leave on 19th May.

12. Dr. GRAHAM, Medical Officer, General Hospital, was transferred to the Federated Malay States at the end of February, and Dr. COOPER, Medical Officer, was promoted, *vice* Dr. GRAHAM, and Dr. FURNIVALL was appointed Medical Officer in place of Dr. COOPER. Dr. FURNIVALL arrived from England and took up his duties on 25th March. Dr. COOPER was transferred to the Federated Malay States at the latter end of October, and his place was filled up by the transfer of Dr. SMITH, Medical Officer, from Singapore.

13. A Deputy Government Analyst was appointed for Penang, and Mr. BROOKE the first holder of the appointment arrived here on the 1st June. He was transferred to Singapore on 2nd October, 1909, and was succeeded by Mr. COWAP.

14. The Principal Civil Medical Officer visited this Settlement in April and October, on inspection duty.

Quarantine Camp.

REPORT BY DR. A. H. KEUN, *Medical Officer*.

1. There were no patients in the camp at the beginning of the year. During the year the following diseases were treated :—

Chicken-pox 29, Measles 8, Small-pox 3 (with 2 deaths), Cholera 1 (which proved fatal), and Bubo 1, making a total of 42 treated with 7·14 per cent deaths to total treated; and 1·16 average daily sick.

2. Twenty-four out of 42 sought admissions to the camp by themselves or were brought in by relatives and friends, the remaining 18 cases were sent in by the Municipal Health Officer and Deputy Health Officer of the port.

3. Six new servants' quarters for the Quarantine Camp and one for the European Small-pox Hospital were erected. The grounds of the Quarantine Camp were filled in with red earth for nearly a foot, and a new road from the main gate to the wards was begun.

4. I attached tables *A* and *B* to show seasonal variations of infectious diseases.

5. The Quarantine Camp was occupied for 233 days during the year.

6. Forty-two admissions took place during the year as compared with 61 for 1908. There were 3 deaths, 2 from Small-pox and 1 from Cholera. One of the Small-pox deaths occurred in a European lady who was landed here from Rangoon on the 1st March and died on the 7th March, she bore no marks of vaccination and the disease was of a most malignant and hæmorrhagic type, the other death from Small-pox was in a Chinaman sent from No. 99, Malay Street, by the Municipal Health Officer and who died within 11 hours of admission, the third death was in a Eurasian Government Clerk suffering from Cholera which he contracted on his way from Singapore to India on leave.

TABLE A.

MONTHS.				Small-pox Admissions.	Chicken-pox Admissions.	Cholera Admissions.
January	...	...	...	...	9	...
February	...	...	...	...	9	1
March	...	...	...	2	1	...
April	...	...	...	...	2	...
May	...	...	...	...	1	...
June	...	...	...	...	...	...
July	...	...	...	...	1	...
August	...	...	...	1	2	...
September	...	...	...	...	2	...
October	...	...	...	...	2	...
November	...	...	...	...	...	...
December	...	...	...	...	...	...
Total				3	29	1

TABLE B.

NATIONALITIES.				Small-pox.	Chicken-pox.	Cholera.
Europeans	...	...	...	1	...	...
Eurasians	...	...	...	...	...	1
Chinese	...	...	...	1	...	...
Malays	...	...	...	1	...	...
Islam Klings	...	...	...	...	4	...
Hindus	...	...	...	...	25	...
Jaffnese	...	...	...	...	...	...
Javanese	...	...	...	...	...	...
Sikhs	...	...	...	...	...	...
Total				3	29	1

TABLE C.

Nationalities.		Remained.	Admitted.	Total.	Discharged.	Transferred.	Absconded.	Died.	Remaining.
Europeans	...	...	1	1	...	...	...	1	...
Eurasians	...	...	1	1	...	...	...	1	...
Tamils	...	...	33	33	33	...	...	...	...
Islam Klings	...	...	4	4	4	...	...	...	...
Chinese	...	...	2	2	1	...	...	1	...
Malays	...	...	1	1	1	...	...	...	...
Total		...	42	42	39	...	...	3	...

General Hospital.

REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer.*

There were 192 patients admitted to the European wards and 1,170 to the native wards as compared with 205 and 1,312, respectively, during the previous year. The mortality excluding deaths within 24 hours of admission was 4·25 for Europeans, etc., 5·81 for natives, that for 1908 being 6·05 for Europeans, etc., and 6·60 for native patients.

The principal diseases treated were:—

Malaria	...	...	...	...	165
Dysentery	...	...	...	...	42
Beri-beri	...	...	...	...	15
Venereal	...	...	...	...	86
Diarrhœa	...	...	...	...	23
Phthisis	...	...	...	...	26

2. *Beri-beri*.—Fifteen cases were under treatment as against 39 in 1908. All the patients in hospital were fed on parboiled rice throughout the year. No cases of Beri-beri occurred amongst patients admitted for other diseases.

3. *Operations*.—One hundred and sixty-three operations were performed during the year as against 98 in 1908.

4. *Staff*.—There have been several changes amongst the Medical Officers of this Hospital, Drs. GRAHAM and COOPER were transferred to the Federated Malay States during the year and their places were filled up by Drs. SMITH and FURNIVALL.

5. *Nursing*.—Miss HARDING was in charge of the nursing staff during the year. Miss COLLEY who was on long leave in Australia since August, 1908, returned from leave in October and resumed duties *vice* Miss BROWN who has been acting during her absence.

Miss MELDRUM who was granted six months' leave from 23rd May resumed her duties on 22nd November, Miss TAYLOR whose first period of agreement expired on the 12th December, 1909, was confirmed in her appointment and was granted six months' half-pay leave from 23rd December, and Miss BROWN was again appointed acting nurse in her place. Miss MILES was granted six months' leave from the 23rd November, Miss WOLFF who resigned her appointment was succeeded by Miss LLOYD in June. Misses RICHARDS and DAVIDSON were appointed Nurse Probationers from the 1st February.

6. *Buildings*.—In October the female patients were removed from the old female ward which was badly ventilated and unsatisfactory to the lower storey of the Lock Ward, the lock patients being transferred to the upper storey. The Nurses' quarters were rebuilt but were not yet in occupation at the end of the year.

Table showing the Admissions, Daily Average and Percentage of Deaths, in the General Hospital, Penang,

	Remained	Admitted.	Total Treated.	Discharged.	Transferred.	Absconded.	Died.	Remaining.	Average Daily Sick.	Percentage of Deaths to Total Treated.	Died in 24 Hours	Percentage of deaths to total treated excluding those dying within 48 Hours of Admission.
Europeans ...	1	192	193	175	...	...	13	5	6'14	6'73	5	4'25
Natives ...	30	852	882	721	30	6	89	33	35'17	10'09	21	5'81
Native Police ...	7	318	325	316	...	1	1	10	9'06	31	...	
Total ...	38	1,362	1,400	1,212	30	7	103	48	50'37	7'35	26	10'06

Prison Hospital.

REPORT BY DR. A. H. KEUN, *Medical Officer*.

1. Four thousand and fifty-one prisoners were admitted during the year, the daily average prison population being 278·39.

2. *General Statistics.*—

—		A. Arrived in Gaol.	B. Average daily No. in Gaol.	C. Sent to Hospital.	D. Ratio C. to A.	E. Died.	F. Ratio E. to B.
Non-vagrants	...	3,877	252·87	297	7·33	12	4·74
Vagrants	...	174	25·52	52	29·88	8	31·34

3. Three hundred and forty-nine prisoners were admitted into hospital, (exclusive of those detained for 48 hours for trivial complaints), of these 52 were vagrants. The hospital sick-rate was 16·30, and the Prison rate 5·85.

4. The following Table A shows the proportion of the admissions to Hospital to the arrivals in Prison for the past ten years:—

TABLE A.

YEARS.	NON-VAGRANTS.			VAGRANTS.		
	Arrived in Gaol. A.	Admitted to Hospital. B.	Percentage B to A.	Arrived in Gaol. C.	Admitted to Hospital. D.	Percentage C. to D.
1900	2,702	53	1·95	...	...	...
1901	2,837	98	3·45	...	...	...
1902	3,534	103	2·91	...	...	...
1903	3,674	96	2·61	...	...	...
1904	4,705	155	3·29	...	...	...
1905	4,847	337	6·95	...	...	...
1906	3,841	356	9·26	52	18	34·61
1907	3,280	245	7·50	143	48	33·57
1908	3,926	280	7·13	260	70	23·07
1909	3,877	297	7·33	174	52	29·88

The average daily sick was non-vagrants 12·71 and vagrants 3·59.

5. *Beri-beri.*—There were two admissions for this disease during the year, both were admitted into Prison with the disease already developed in them. All the inmates were fed on parboiled rice.

6. The following table gives the chief diseases treated with deaths from each :—
TABLE B.

Diseases.				Treated.	Deaths.	Percentage.
Dysentery	...	...	...	45	5	11·11
Diarrhœa	...	...	...	71	2	2·81
Abscess	...	...	...	36	...	...
Ulcer	...	...	...	39	...	...
Venereal Diseases	...	...	...	14	...	...

of the 71 treated for Diarrhœa 38 acquired the disease in the prison and in 33 the disease was brought in from outside. Of the 45 cases of Dysentery 22 occurred among the prison inmates and 23 among prisoners admitted with the disease who were admitted at once into hospital.

7. The 20 deaths during the year were due to the following diseases :—

Non-vagrants.—Dysentery 2; Anæmia 1; Malaria Fever, malignant 1; Pneumonia 1; Sub-acute Rheumatism (Dysentery) 1; Tetanus 1; Hemiplegia 1; Pericarditis 1; Aneurysm of the Aorta 1; and Diarrhœa 2.

Vagrants.—Dysentery 3; Anæmia 1; Epilepsy 1; Phthisis 2; and Bright's Disease 1.

8. Twenty-four vagrants and 93 non-vagrants were admitted directly into Hospital on admission to Prison.

9. Twenty-five prisoners showed signs of present and past venereal diseases; 183 bore traces of morphia injections equivalent to a percentage of 4·51 to the total admissions to prison, and 23 were confirmed opium smokers, etc., the percentage to total admissions being ·56.

10. Five hundred and seventy-seven prisoners were vaccinated during the year, the percentage of successful cases was 93·91, as against 714 prisoners last year with a percentage of 96·9 successful cases.

Return of work done during the year.

Nationality.		Remained.	Admitted.	Total.	Discharged.	Transferred.	Absconded.	Died.	Remaining.	Remarks.
Chinese	...	18	260	278	253	...	...	17	8	
Tamils	...	2	49	51	45	...	...	2	4	
Islam Klings	...	1	4	5	4	...	...	...	1	
Malays	...	2	27	29	29	...	...	...	...	
Javanese	...	...	4	4	4	...	...	...	...	
Bengalis	...	...	3	3	2	...	...	1	...	
Boyanese	...	...	1	1	1	...	...	...	...	
Sikhs	...	...	1	1	1	...	...	...	...	
Total		23	349	372	339	...	...	20	13	

Return of Venereal Diseases Admitted to the Prison Hospital.

DISEASES.	ADMISSIONS.		DEATHS.		REMARKS.
	Male.	Female.	Male.	Female.	
Gonorrhœa	3	...	...	...	} Prostitutes Nil.
Gonhl. Arthritis ..	1	...	...	...	
Primary Syphilis ...	...	...	...	...	
Secondary Syphilis ...	5	...	...	...	
Bubo	4	...	...	...	

District Hospital.REPORT BY DR. A. H. KEUN, *Medical Officer.*

1. *Buildings.*—The new eye ward which was started last year was completed and occupied. This ward is under the charge of Dr. KIRK, Honorary Ophthalmic Surgeon, to the District Hospital. During the year there were 120 cases treated, 28 operations were performed and there were also 18 out-patients treated in the hospital.

2. *Staff.*—As in previous years there were changes among the Assistant Surgeons attached to this hospital. Mr. CLARKE was transferred to Singapore in August when Mr. RODRIGUEZ relieved him, while Mr. BATEMAN relieved Mr. SARDESAI on 3rd February, 1909. Mr. SCRIVEN continued throughout the year doing good work. The work of the Staff was excellent. Mr. LIM TAI LEE, the Hospital Steward, maintained the Hospital Grounds and the work of the servants in a high state of efficiency. Dr. FURNIVALL in May took over charge of seven wards in the District Hospital thus enabling me to undertake the medical charge of all Government servants and their families. This work necessitated a visit daily to Chowrasta Dispensary where all Government servants and members of their families could consult me. In addition to the charge of these wards, Dr. FURNIVALL had charge of the female ward of the District Hospital. The administration and working of this ward was in June transferred to the General Hospital. As usual there were frequent changes among Dressers.

3. *Work Done.*—On the 1st January, 1909, there were 400 cases under treatment. During the year 4,187 were admitted: males 3,933, including 52 in the European ward; females 254, making a total treated of 4,587.

4. The average daily number of sick was males 343·44, females 17·13. There were 646 deaths, males 594, including one Eurasian and 52 females. The percentage of deaths to total treated being thus 14·08 as compared with 15·25 for the previous year; 15·36 in 1907 and 17·49 in 1906, of these 8 died within 24 hours.

5. *Phthisis.*—There was again this year a steady increase of admissions, 261 cases were treated with 129 deaths, giving a percentage of 49·42, last year 215 with 116 deaths, the percentage being 53·95.

6. *Venereal Diseases* accounted for 582 admissions.

7. *Malarial Fevers* have been slightly less this year than last; thus there were 460 treated with 39 deaths (mortality 8·47). In 1908—495 with 52 deaths (mortality 10·54). In 1907—298 with 31 deaths (mortality 10·47), and in 1906 366 cases, 37 deaths (mortality 10·10). In every case the diagnosis was made on the results of a blood examination, and every patient complaining of fever in the course of treatment for other disease had his blood examined.

8. *Beri-beri* accounted for 153 admissions with 26 deaths (mortality 16·99), as contrasted with 260 admissions and 45 deaths (mortality 17·30) in 1908; no cases occurred amongst inmates in the other wards of the hospital, only 5 Tamils were admitted for this disease, the rest being Chinese. Parboiled rice was continued in use.

9. *Dysentery*.—295 cases were treated with 122 deaths (mortality 41·35). This high mortality is accounted for by the fact that cases for the most part are brought in when treatment by outside doctors, etc., have proved of no avail and when patients were in a practically moribund condition or when complications such as œdema, marasmus, etc., have already set in.

10. *Diarrhœa, Acute and Chronic* accounted for 115 cases with 35 deaths (mortality 30·43), and in 1908 239 cases with 86 deaths (mortality 35·98).

11. Table *A* attached shows the admissions, deaths, etc., for the chief diseases treated, *B* and *C* for *Beri-beri* and *Venereal Diseases*, respectively, together with a special return as required by the Principal Civil Medical Officer, Return of Admissions, Discharges, Deaths, etc., appears this year for the first time in the Annual Report.

TABLE A.

Table showing Admissions, Deaths with percentage from the Principal Diseases in the District Hospital, Penang, for the past four Years.

DISEASES.	1906.			1907.			1908.			1909		
	Cases Treated.	Died.	Percentage.	Cases Treated.	Died.	Percentage.	Cases Treated.	Died.	Percentage.	Cases Treated.	Died.	Percentage.
Malarial Fevers	366	37	10'10	298	31	10'04	495	52	10'54	460	39	8'4
Beri-beri	231	44	19'04	164	33	20'01	260	45	17'30	200	26	13'00
Dysentery	358	162	45'25	180	98	52'02	230	98	42'60	295	122	41'35
Diarrhoea	73	28	38'35	96	40	41'06	239	86	35'98	115	35	30'43
Phthisis	213	138	64'78	172	102	59'05	215	116	53'95	261	129	49'42
Anæmia	167	57	34'13	178	37	20'08	356	102	28'65	304	66	21'71
Veneral Diseases	621	22	3'54	688	18	2'76	691	26	3'76	582	15	2'57

TABLE B.

Table showing the Admissions and Deaths at the District Hospital, Penang, for Beri-beri for the Year 1909.

NATIONALITY.	January.		February.		March.		April.		May.		June.		July.		August.		Septem-ber.		October.		Novem-ber.		Decem-ber.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Chinese	23	3	15	2	16	3	7	2	16	7	7	...	6	2	10	2	11	...	8	3	15	1	14	1	148	26
Tamils	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	5	...
TOTAL	23	3	15	2	18	3	7	2	16	7	7	...	6	2	10	2	11	...	9	3	16	1	15	1	153	26
Rainfall	3'39		5'19		3'32		2'32		3'11		14'67		6'86		14'76		26'57		32'11		15'68		2'38		130'36	

TABLE C.

Return of Venereal Diseases admitted to the District Hospital, Penang, for the Year 1909.

DISEASES.			ADMISSIONS.		DEATHS.		REMARKS.
			Males.	Females.	Males.	Females.	
Primary Syphilis	...	...	35	1	...	...	Prostitutes 7
Secondary Do.	...	...	304	9	12	...	
Tertiary Do.	...	...	42	5	2	1	
Gonorrhœa	...	...	35	4	...	...	
Gonorrhœal Ophthalmia	...	...	13	...	...	...	
Do. Arthritis	...	...	10	...	...	...	
Do. Iritis	...	...	2	...	...	...	
Soft chancre or chancroid	...	...	9	...	...	...	
Bubo	...	...	53	3	...	...	

Nationality Return of the District Hospital, Penang, for 1909.

Nationality.			Remained.	Admitted.	Total.	Discharged.	Transferred.	Absconded.	Died.	Remaining.
Europeans	...	...	2	12	14	13	...	...	...	1
Eurasians	...	...	...	31	31	26	...	1	2	2
Japanese	...	...	1	5	6	6	...	...	...	...
Chinese	...	...	296	2,412	2,708	1,800	51	241	364	252
Tamils	...	...	97	1,665	1,762	1,303	25	87	275	72
Bengalis	...	...	2	25	27	23	...	1	2	1
Javanese	...	...	1	10	11	10	...	...	...	1
Siamese	...	...	...	2	2	...	2	...	...	...
Malays	...	...	1	16	17	11	...	1	2	3
Ceylonese	...	...	...	2	2	2	...	...	...	...
Sikhs	...	...	...	4	4	3	...	...	1	...
Afghans	...	...	...	1	1	1	...	...	...	...
Arabs	...	...	...	2	2	2	...	...	...	...
			400	4,187	4,587	3,200	78	331	646	332

Eye Ward, District Hospital, Penang.

REPORT BY DR. J. KIRK, *Honorary Visiting Ophthalmic Surgeon.*

1. I was in charge of this department during the year. The new building was taken over early in January, and has proved very suitable for its purpose. There has been a great improvement in the comfort of the patients and in the results of treatment. Post operation sepsis and patient-to-patient infection which were very common in the old ward have quite disappeared.

The class for whom the department is intended are taking every month more advantage of it and the ward is generally full. I should like, however, to see a larger number of out-patients and every effort should be made to bring to the notice of the lower classes of the native community among whom preventible eye disease is rife, the opportunities they have for free European treatment.

The old Eye Ward is now used for the reception of incurable blind cases and for cases of acute gonorrhœal infection. There is too great a risk of infection to keep the latter class of cases in the new ward.

2. Trachoma as in previous years furnishes a very large proportion of the cases treated. The ravages of this disease among the poorer classes as I have pointed out in previous reports is not yet realized. It is responsible directly and indirectly for 80 per cent of eye trouble and blindness and the durability, general misery, and physical incapacity which follows.

3. There were 120 cases admitted during the year as in-patients and 18 attended as out-patients. Twenty-eight operations were performed.

An analysis of the cases treated is as follows:—

				<i>Cases.</i>
				—
Simple acute Conjunctivitis	...	...	...	7
„ chronic „	...	...	...	2
Trachoma	...	...	...	38
Acute Gonorrhœal Ophthalmia	...	...	...	14
Acute Ophthalmia (Non-Gonorrhœal)	...	...	...	3
Pterygium	...	...	...	2
Interstitial Keratitis	...	...	...	3
Acute Suppurative Keratitis	...	...	...	2
Corneal ulcer	...	...	...	3
„ abrasion	...	...	...	1
Wound of Cornea	...	...	...	1
Hypopyon Keratitis	...	...	...	1
Corneal Staphyloma	...	...	...	4
Keratomalacia	...	...	...	1
Syphilitic Iritis	...	...	...	14
Gonorrhœal Iritis	...	...	...	2
Simple Iritis	...	...	...	7
Wound of Iris	...	...	...	1
Senile cataract	...	...	...	5
Traumatic cataract	...	...	...	1
Simple optic nerve Atrophy	...	...	...	7
Toxic Amblyopia	...	...	...	3
Anæmia of Retina	...	...	...	7
Specific Choroiditis	...	...	...	1
Ulcer of orbit	...	...	...	1
Tumor of orbit	...	...	...	1
Ulcer of Lachrymalsac	...	...	...	2
Myopia	...	...	...	2
Presbyopia	...	...	...	1
Glaucoma	...	...	...	1

4. The operations performed during the year were as follows:—

	Cases.			
Peritomy of Conjunctiva	...	...	...	1
Removal of Pterygium	...	...	...	2
Iridectomy	...	...	...	8
Paracentesis of Anterior chamber	...	...	...	2
Removal of cataract	...	...	...	6
Cauterisation of Ulcers of Cornea	...	...	...	2
Removal of corneal foreign body	...	...	...	1

Enucleation of Eye-ball 4; Adherent Iris 1; Opening orbital ulcer 1.

Balik Pulau Hospital.

REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer.*

Buildings and Grounds.—Two new wardlets have been added to the hospital buildings for the purpose of epidemic diseases. Many petty repairs such as replacing new planks in wards, ataping the roof wherever damaged have been attended to.

The grounds were well kept throughout the year.

2. *Staff.*—Assistant Surgeon BATEMAN was transferred to District Hospital, Penang, at the end of January, 1909, and Assistant Surgeon SARDESAI was in charge from February to the end of the year. Dresser KUNG KOW SYE was transferred at the beginning of the year and Dresser LEE CHIN HOE was working till the 20th October, 1909, on which date he resigned and was substituted by Dresser ALCAIN from District Hospital, Penang, to the end of the year.

3. *Work Done.*—During the year 319 patients were admitted, this with 27 remaining from the previous year brings the total treated to 346 or 117 more than the previous year. The daily average sick was 38·98, 8·80 more than the year before.

The principal diseases with deaths if any, in brackets, were as follows:—Malarial Fever 78 (7), Syphilis 40 (1), Anæmia 20 (3), Beri-beri 18 (3), Rheumatism 19 (1), Dysentery 9 (5), Phthisis 5 (5), Ulcers 63 (4), most of the ulcers were of a chronic nature and primarily due to traumatism in debilitated subjects.

4. *Health.*—Good, no epidemic outbreak.

Nationality return of the Balik Pulau Hospital, Penang, for 1909.

	Remained.		Admitted.		Total.		Discharged.		Transferred.		Absconded.		Died.		Remaining.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Chinese	22	1	176	1	198	2	135	1	2	1	14	...	24	..	23	...
Tamils	3	...	111	6	114	6	94	4	...	...	3	2	*9	...	8	...
Malays	1	...	21	1	22	1	20	1	...	...	...	...	...	...	2	...
Bengalis	...	...	3	...	3	...	2	...	...	...	1	...	...	...	...	...
Total	26	1	311	8	337	9	251	6	2	1	18	2	33	...	33	...

* One Tamil died within 24 hours of admission.

Return of Venereal Diseases.

Admissions 1909	...	...	...	...	319
Venereal Diseases	...	...	...	...	44
Prostitutes	...	...	...	...	Nil.

Lumut Hospital, Dindings.

REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer.*

1. *Buildings.*—Two mosquito proof rooms were built for the Dressers' quarters.

2. *Work Done.*—Two hundred and eighty-nine cases were admitted during the year, this with the 7 remaining from the previous year makes a total of 296 cases treated, being 74 cases less than the previous year. The principal diseases treated were in order of frequency:—General Diseases 146, of which 114 were of Malarial Fever in its various forms. Diseases of the skin 69, Injuries 37, Diseases of the Digestive System 22, Diseases of the Nervous System 5, Respiratory System 3, Animal poison 3, Diseases of the Eye 2, Ear 2, General injuries 2, Lymphatic System 1, Urinary System 1, Generative System 1, Affection consequent on parturition 1, and Diseases of the Connective Tissue 1. The average daily sick was 10·6.

3. *Mortality.*—Twenty-four deaths occurred during the year, of these 5 died within 24 hours of admission. The causes of deaths in the fatal cases were:—Diarrhœa 7, Anæmia 4, Beri-beri 2, Dysentery 2, Phthisis 2, Erysipelas 1, Malaria 1, Chronic Malaria 1, Multiple Neuritis 1, Paralysis 1, Infantile Convulsion 1, and starvation 1. The percentage of deaths to total treated was 8·1. The admissions and deaths were made up as under:—

			<i>Admissions.</i>	<i>Deaths.</i>
			—	—
District of Dindings	...	...	165	14
Sitiawan, Lower Perak	...	..	124	10
			—	—
		Total ...	289	24
			—	—

4. *Health.*—The health of the Settlement has been satisfactory. No case of infectious disease was reported. The health of the Malay Police was good. There were 12 Police admissions to the Hospital. No death occurred. The general health of the population in Lumut was good.

Leper Asylum, Pulau Jerejak.

REPORT BY DR. J. C. C. FORD, *Medical Officer-in-Charge.*

Staff.—The Asylum was this year placed under the supervision of the Medical Officer, Quarantine Station, and in May I took charge. Mr. BRUCE continued as Assistant Surgeon, throughout the year.

Dressers.—The four Colonial dressers AROKIASAMY, V. SANTIAGO, LEE CHIN TEE and PHANG CHECK SENG worked the whole year. PETER CASTRO was appointed on the 23rd January as an additional dresser for the Perak wards to assist J. E. HYPE and M. DANIEL; the latter was transferred to Perak and relieved by IYADURAI in May.

Those of the lepers who are sufficiently able bodied are detailed off as ward attendants, toties and garden labourers and are remunerated with a small monthly wage.

<i>Statistics.</i> —There remained on 31st Decem-				{ Colonial 256 }	370
ber, 1908	...	...	...		
Admitted during 1909	...	...	...	{ Colonial 90 }	207
				{ Perak 117 }	
				Total inmates	577
Discharged (Repatriated to China)	...			{ Colonial 2 }	2
Transferred	...	...	...	{ Nil. }	
Absconded	...	...	...	{ Colonial 12 }	21
				{ Perak 9 }	
Died	...	...	...	{ Colonial 92 }	134
				{ Perak 42 }	
Remaining on 31st December, 1909	...			{ Colonial 240 }	420
				{ Perak 180 }	

The average daily number of inmates was 396.35. The percentage of deaths was 23.22. The number of leper inmates during 1909 is the largest ever recorded.

The longest term of residence in the Asylum is 19 years and five months and the disease in this leper, who is Chinese, seems to be arrested. He suffers from the anæsthetic variety and has been in the same condition for years. The youngest lepers are aged 12 and 13 years respectively.

On two occasions have father and son been admitted. On the first occasion both father and son were admitted together; on the next the son came first and the father followed a month afterwards. They were Tamils.

Eye Affections.—Three lepers have one eye destroyed and nine others are totally blind.

Buildings, etc.—The new Perak ward was occupied in March and subsequently a covered way from the ward to the kitchen and latrine was erected. During the month of September the Assistant Surgeon removed to quarters on the Quarantine Station. His former quarters are now used as a store room and club room for the dressers and attendants. The Police guard has been removed to quarters in the north camp, Quarantine Station.

These removals necessiated a rearrangement of the telephone service on Pulau Jerejak. Several minor repairs were attended to by the Public Works Department.

Visits.—Official visits were paid during the year by the Resident Councillor, Penang, the Principal Civil Medical Officer and State Surgeon, Perak, the Secretary to the Mission to Lepers in India and the East and Bishop BARRILON of Malacca were also visitors.

Towkay GOH TIAK CHEE of Penang presented each leper with a small sum of money at the Chinese New Year and this amount was supplemented from the Anti-Mendicity Fund.

The tables appended are:—

Table *A.*—Giving the number of admissions, total number of inmates, the number of deaths and the daily average for the last 20 years.

Table *B.*—Showing the number of inmates with daily average in each month.

Table *C.*—Showing the admissions, deaths, discharges and abscondments among Colonial and Perak lepers in each month.

Table *D.*—Giving the nationalities of inmates in the Asylum.

Table *E.*—Showing occupation of inmates.

TABLE A.

Giving the number of admissions, the total number of inmates, the number of deaths and the daily average for the past 20 years.

Years.			Remained from previous year.	ADMISSIONS.		Total.	Deaths.	Percentage of deaths.	Daily Average.
				Colonial.	Perak.				
1890	...	...	160	137	129	426	91	21·36	183·33
1891	...	...	221	132	...	353	123	34·84	195·07
1892	...	...	187	178	110	475	122	25·68	282·96
1893	...	...	310	118	4	432	87	20·13	307·80
1894	...	...	321	111	60	492	129	26·21	311·18
1895	...	...	332	121	34	487	146	29·97	313·06
1896	...	...	301	145	24	470	136	28·93	303·37
1897	...	...	286	152	...	438	130	29·68	278·64
1898	...	...	253	152	16	421	123	29·21	262·10
1899	...	...	247	123	20	390	142	36·41	239·15
1900	...	...	214	97	59	370	115	31·08	214·15
1901	...	...	233	80	29	342	88	25·73	233·35
1902	...	...	235	84	33	352	73	20·73	243·27
1903	...	...	244	119	71	434	84	19·35	264·53
1904	...	...	334	92	42	468	140	29·91	311·02
1905	...	...	282	148	36	466	78	16·73	319·73
1906	...	...	357	107	32	496	138	27·82	344·30
1907	...	...	336	100	52	488	110	22·54	361·74
1908	...	...	356	98	52	506	107	21·15	383·73
1909	...	...	370	90	117	577	134	23·22	396·67

TABLE B.

Showing the number of inmates with the daily average in each month of 1909.

Months.			Total inmates.	Daily average.
January	...	...	432	414·80
February	...	...	420	411·89
March	...	...	414	401·13
April	...	...	397	385·76
May	...	...	390	379·83
June	...	...	380	375·06
July	...	...	377	371·77
August	...	...	409	375·93
September	...	...	420	403·93
October	...	...	414	407·58
November	...	...	513	409·46
December	...	...	430	422·93

TABLE C.

Showing the admissions, deaths, discharges and abscondments among Colonial and Perak Lepers in each month.

MONTHS.		Total. Admitted.	ADMISSIONS.		Deaths.		Dis- charged.		Trans- ferred.		Abscond- ments.	
			Colonial.	Perak.	Colonial.	Perak.	Colonial.	Perak.	Colonial.	Perak.	Colonial.	Perak.
January	...	62	22	40	7	5	2	...	...	...	3	...
February	...	5	4	1	10	2	...	...	...	...	...	1
March	...	7	7	...	11	4	...	...	...	...	3	3
April	...	4	3	1	11	3	...	...	...	...	...	...
May	...	7	7	...	7	2	...	...	...	...	3	1
June	...	3	3	...	6	2	...	...	...	...	1	...
July	...	6	6	...	4	3	...	...	...	...	...	...
August	...	39	19	20	9	5	...	...	...	...	...	...
September	...	25	5	20	3	4	...	...	...	...	1	...
October	...	2	2	...	6	2	...	...	...	...	1	...
November	...	38	3	35	15	4	...	...	...	...	...	3
December	...	9	9	...	3	6	...	...	...	...	...	1
Total	...	207	90	117	92	42	2	...	...	...	12	9

TABLE D.
GIVING THE NATIONALITY OF INMATES.

<i>Nationalities.</i>					<i>Number.</i>
Chinese	Hokkien	...	...	...	67
	Teichiu	...	...	...	89
	Cantonese	...	...	...	196
	Kheh	...	...	...	123
	Hailam	...	...	...	33
	Lui Chu	...	...	...	1
	Unknown	...	...	...	1
Arab	...	...	...	...	1
Tamils	...	...	...	...	58
Malays	...	...	...	...	5
Gurkha	...	...	...	...	1
Bengali	...	...	...	...	1
Eurasian	...	...	...	...	1
					577

TABLE E.
SHOWING OCCUPATION OF INMATES.

Barber	...	...	...	...	9
Blacksmith	...	...	...	...	12
Carpenter	...	...	...	...	24
Cart Driver	...	...	...	...	7
Cook	...	...	...	...	13
Clerk	...	...	...	...	1
Dhoby	...	...	...	...	1
Fisherman	...	...	...	...	3
General Coolie	...	...	...	...	273
Gardener (vegetable)	...	...	...	...	46
Gold Smith	...	...	...	...	1
Gilder	...	...	...	...	1
Hawker	...	...	...	...	2
Mason	...	...	...	...	9
Miner (tin)	...	...	...	...	72
Planter	...	...	...	...	9
Policeman	...	...	...	...	1
'Rikisha puller	...	...	...	...	16
Syce	...	...	...	...	1
Shoe-maker	...	...	...	...	1
Sailor	...	...	...	...	3
Tailor	...	...	...	...	4
Trader	...	...	...	...	10
Tin Smith	...	...	...	...	3
Wood Cutter	...	...	...	...	16
Nil	...	...	...	...	39
					577

Female Leper Ward, Jelutong.

REPORT BY DR. A. H. KEUN, *Medical Officer-in-charge.*

1. There were 15 patients remaining at the end of 1908 :—Eurasian 1, Chinese 12, and Hindu 2.
2. Six cases were admitted during the year. Chinese 5, Hindu 1 making a total of 21 treated.
3. There were three deaths during the year, 2 Chinese and 1 Hindu from Cardiac failure. The percentage of deaths to total treated was 14.28, and the average daily sick was 16.87.

APPENDIX C.

PROVINCE WELLESLEY.

REPORT BY DR. W. S. SHEPPARD, *Medical Officer.*

1. The health of this district was fairly good in 1909. No serious epidemic occurred.
2. The registered births numbered 3,880 and the deaths 3,823, as compared with 4,328 and 3,627, respectively, in 1908.
The estimated population was 122,216.
3. Two thousand six hundred and ninety-six patients were admitted to the three Government Hospitals. There were 342 deaths. The corresponding figures for 1908 were 2,867 and 332.
4. Twenty-one cases of Small-pox occurred at Paya Kladi in the north of the Province in the months of April, May and June. Temporary isolation sheds were erected locally and 391 people were vaccinated. The infection probably came from Kedah.
Eleven cases of Measles occurred in November and December in the southern parts of the districts.
5. The water supply in the south of the Province has been improved.
6. I was in medical charge throughout the year and Assistant Surgeons NICHOLSON, WHEATLEY and DUTTA were stationed at Butterworth, Bukit Mertajam and Sungai Bakap respectively.

Butterworth Hospital.

1. A few slight alterations and repairs were carried out during the year. The fabric remains serviceable, though in design, part of it is much out of date.
2. Dresser FRANCIS went on leave in September and Dresser KESAVEN replaced him. All the staff worked satisfactorily.
3. The following statistics briefly summarise some of the work done :—

Remaining from 1908	...	...	...	52 cases
Admitted 1909	...	...	...	700 „
Total treated	...	...	...	752 „
Average daily number of sick	...	...	...	49.46
Discharged	...	...	...	601
Transferred	...	...	...	4
Absconded	...	...	...	8
Died	...	...	...	102
Percentage of deaths to total treated	...	...	...	13.56
Percentage of deaths to total treated exclusive of those who died within 48 hours of admission	...	...	...	11.08

4. *Principal diseases treated:—*

Ulcers	...	...	...	...	109
Malarial Fever	...	...	...	...	93
Dysentery	...	...	...	...	70
Injuries	...	...	...	...	59
Venereal Diseases	...	...	...	...	53
Diarrhœa	...	...	...	...	47
Ankylostomiasis	...	...	...	...	39
Bronchitis	...	...	...	...	23
Phthisis	...	...	...	...	22
Beri-beri	...	...	...	...	13
Anæmia	...	...	...	...	11

5. *The following major operations were performed:—*

Amputations of limbs	...	...	...	3
Thoracotomy	...	...	...	2
Sequestrotomy	...	...	...	1
Operation for Piles	...	...	...	3
Hepatic Abscess	...	...	...	1

There was one death.

6. Police cases treated numbered 130.

Bukit Mertajam Hospital.

25~ 1. Two cells for prisoners were erected. The buildings and grounds have been maintained in good order.

2. The following figures represent the work done:—

Remaining from 1908	...	...	...	63 cases
Admitted 1909	...	...	...	962 „
Total treated	...	...	...	1,025 „
Average daily number of sick	...	...	...	53'51
Discharged	...	...	...	867 „
Transferred	...	...	...	Nil.
Absconded	...	...	...	5
Died	...	...	...	110
Percentage of deaths to total treated	..	..	..	10'73
Percentage of deaths to total treated exclusive of those dying within 48 hours of admission	...	...	...	7'57

3. Fifty-six cases of Beri-beri were admitted, with only 6 deaths, 4 of these occurring within 24 hours of admission.

4. Two hundred and thirty-six cases of Malarial Fever were admitted. Mosquito nets have been introduced into the hospital for the first time this year. The increase in the number of malarial diseases is not easy to account for. I think that it is mostly due to the greater use of the hospital by the people and the improved diagnostic skill of the Assistant Surgeon in charge. Attempts will be made to popularise the use of quinine in this part of the Province.

5. A considerable number of minor operations (opening of abscesses) skin-grafting, circumcision, etc., were performed during the year.

Amongst major operations there were:—

Amputation of thigh	...	...	...	...	1
Colotomy	...	...	...	...	1
Thoracotomy	...	...	...	...	4

There were no deaths.

6. Principal diseases treated were :—

Malarial Fever	...	...	...	236 cases
Ulcers	...	...	...	122 „
Secondary Syphilis	...	...	...	80 „
Chronic Dysentery	...	...	...	59 „
Beri-beri	...	...	...	56 „
Pulmonary Tuberculosis	...	...	...	35 „
Gonorrhœa and its sequelæ	...	...	...	35 „
Chronic Diarrhœa	...	...	...	34 „
Chancroid	...	...	...	25 „
Chronic Bright's disease	...	...	...	23 „
Ankylostomiasis	...	...	...	23 „
Valvular disease of heart	...	...	...	14 „
Empyema	...	...	...	5 „
Injuries	...	...	...	50 „

Sungai Bakap Hospital.

1. The floors of the main ward and of the office were re-cemented. The grounds and buildings were maintained in good order.

2. The staff remained unchanged.

3. Work done :—

Remaining from 1908	...	...	...	37 cases
Admitted 1909	...	...	...	1,034 „
Total treated	...	...	...	1,071 „
Average daily number of sick	...	...	...	43'30
Discharged	...	...	...	900 „
Transferred	...	...	...	Nil.
Absconded	...	...	...	4 „
Died	...	...	...	130
Percentage of deaths to total treated	...	...	...	12'13
Percentage of deaths to total treated exclusive of those who died within 48 hours of admission	...	...	...	10'29

4. Principal diseases treated were :—

Beri-beri	...	...	...	...	10
Malarial Fever	...	...	...	...	72
Valvular disease of heart	...	...	...	...	17
Bright's disease	...	...	...	...	3
Pneumonia	...	...	...	...	4
Cirrhosis Liver	...	...	...	...	6
Pulmonary Phthisis	...	...	...	...	31
Ankylostomiasis	...	...	...	...	39
Dysentery	...	...	...	...	164
Diarrhœa	...	...	...	...	37
Anæmia	...	...	...	...	36
Syphilis	...	...	...	...	91
Rheumatism	...	...	...	...	7
New growths (malignant and non)	...	...	...	...	8
Ulcer	...	...	...	...	110

5. The following major operations were performed :—

Laparotomy	...	...	...	...	2
Ovariectomy	...	...	...	...	1
Radical cure, inguinal hernia	...	...	...	...	2
" " " hydrocele	...	...	...	...	2
Appendicostomy	...	...	...	...	1
Excision of joints	...	...	...	...	2
Amputation of limbs for injuries and diseases	...	...	...	...	7
Amputation of Penis	...	...	...	...	2
Castration for hernia testis	...	...	...	...	1
Rib resection	...	...	...	...	1
Ligature of Brachial artery	...	...	...	...	1
Sequestrotomy	...	...	...	...	3
Plastic operation	...	...	...	...	2
Besides numerous minor operations.					

Estate Hospitals.

1. The health of the coolies on the estate in the South of the Province and on Prai estate has not been good. There has been a large increase in the number of cases of dysentery. If this one disease could be eliminated from the list, there would be no healthier class than the Tamil coolies.

2. Unfortunately all our efforts in this direction seem to meet with little success. The water supply and the food supply both received careful attention from the managers, but in spite of this, bowel disorders attack the coolie. Whence comes the infection? This problem is yet to be solved.

3. The fact that the adult male Tamil is frequently the only sufferer on estates, when Javanese and Chinese also share a common food and water supply and yet escape intestinal disorders, leads me to suspect the toddy shop to be the source of infection in many cases.

4. The toddy sold to the coolies is, no doubt, often greatly adulterated. On some estates the sale of toddy is in the hands of one of the tindals and complaints of this practice have reached me from the coolies. I think it should be prohibited.

5. Seven samples of toddy which I collected from the estates and submitted to the Assistant Government Analyst showed acetous acid fermentation and contained a considerable quantity of acetic acid. Some authorities state that toddy is not fit for consumption more than 24 hours after collection on account of the acidity which is produced after this period.

6. The managers are themselves suspicious of the quality of some of the toddy sold on their estates and I hope to see some good result follow our effort after reform in this direction.

7. During the year, I submitted samples of water from Batu Kawan Estate to the Government Analyst. Analysis showed slight impurity, probably of vegetable origin. A filter has been erected and there has been considerable improvement in the quality of the water. I expect to see a lower death-rate on this estate next year. The manager has also taken steps to prevent the introduction of unwholesome toddy to the estate.

8. The average death-rate amongst the coolies on the above-mentioned estates was 4.42 per cent as against 4.91 in 1908.

9. A small hospital was built on Bertam Estate during the year, but it is not yet fully equipped.

1. *Prye Estate*.—Assistant Surgeon M. V. NATESEN remained in charge throughout the year.

2.—(a) Admissions	...	...	...	...	934
(b) Transferred to Butterworth Hospital	...	...	...	...	26
do Bukit Mertajam "	...	...	...	...	4
(c) Deaths among (a)	...	...	...	...	16
(d) Percentage of deaths in total coolie population	...	...	...	...	3.25

3. *Principal diseases treated were:—*

Ulcer	...	...	...	...	...	189
Malarial Fever	...	...	...	...	...	158
Dysentery	...	...	...	...	...	153
Gonorrhœa	...	...	...	...	...	66
Diarrhœa	...	...	...	...	...	53

1. *Malakoff Estate:—*

(a) Admissions	...	...	...	...	580
(b) Transferred to Butterworth Hospital	...	...	...	...	48
(c) Deaths among (a)	...	...	...	...	2
(d) Percentage of deaths in total coolie population	...	...	...	...	1.56

2. *Chief diseases treated were:—*

Dysentery	...	...	...	...	14
Fever	...	...	...	...	111
Anæmia	...	...	...	...	25
Bowel disorders	...	...	...	...	39
Venereal Diseases	...	...	...	...	28
Ulcers	...	...	...	...	280

1. *Batu Kawan Estate:—*

(a) Admissions	...	...	...	...	689
(b) Transferred to Sungai Bakap Hospital	...	...	...	...	74
(c) Deaths among (a)	...	...	...	...	21
(d) Percentage of deaths in total coolie population	...	...	...	...	10.28

2. *Chief diseases treated were:—*

Bowel disorders	...	...	...	...	213
Fever	...	...	...	...	91
Ulcers	...	...	...	...	84
Venereal Diseases	...	...	...	...	82

1. *Caledonia Estate:—*

2. Mr. KRISHNA REDDI took charge on 1st December, 1909.

(a) Admissions	...	...	...	...	1,582
(b) Transferred to Sungai Bakap Hospital	...	...	...	...	9
(c) Deaths among (a)	...	...	...	...	41
(d) Percentage of deaths in total coolie population	...	...	...	...	2.75

3. *Principal diseases treated were:—*

Dysentery	...	...	...	...	155
Gonorrhœa	...	...	...	...	47
Simple tertian	...	...	...	...	139
Malarial Cachexia	...	...	...	...	9
Secondary Syphilis	...	...	...	...	24
Anæmia	...	...	...	...	12
Indigestion	...	...	...	...	50
Diarrhœa	...	...	...	...	573
Boil	...	...	...	...	36
Ulcer	...	...	...	...	131
Wound	...	...	...	...	192

1. *Byram Estate:—*

2. Mr. KRISHNA REDDI took charge on 1st December, 1909.

(a) Admissions	...	...	...	...	1,293
(b) Transferred to Sungai Bakap Hospital	...	...	...	...	1
(c) Deaths among (a)	...	...	...	...	35
(d) Percentage of deaths in total coolie population	...	...	...	...	2.92

3. *Principal diseases treated were :—*

Fever	...	...	...	...	354
Bowel disorders	...	...	...	...	678
Venereal Diseases	...	...	...	...	63
Diseases of Respiratory system	...	...	...	...	20
Wounds	...	...	...	...	34
Ulcers	...	...	...	...	37
Eye diseases	...	...	...	...	15
Boil and abscess	...	...	...	...	21
Meningitis	...	...	...	...	2
Parturition	...	...	...	...	9
Anæmia	...	...	...	...	7
Bright's disease	...	...	...	...	2
Convulsion, infantile	...	...	...	...	2
Puerperal eclampsia	...	...	...	...	1

1. *Bakap Plantation :—*

(a) Admissions	...	...	...	...	224
(b) Transferred to Sungai Bakap Hospital	...	...	...	...	47
(c) Deaths among (a)	...	...	...	...	Nil.
(d) Percentage of deaths to total coolie population	...	...	...	...	5.79

2. *Chief diseases treated were :—*

Chronic Dysentery	...	...	...	...	6
Anæmia	...	...	...	...	2

APPENDIX D.

Malacca.REPORT BY DR. E. G. WEIR, *Acting Medical Officer.*

The general health of the Settlement during 1909, judging by the number of deaths recorded, is far from satisfactory although there is some improvement shown on the previous year, the death-rate being 41.46 per mille, against 47.88 per mille for 1908.

The estimated mean population for the year was 98,526 comprised as follows:—

Europeans	...	...	...	...	55
Eurasians	...	...	...	...	1,496
Malays	...	...	...	...	20,617
Chinese	...	...	...	...	75,241
Indians	...	...	...	...	1,039
Others	...	...	...	...	78

The births numbered 4,043 (2,059 males and 1,984 females), against 4,535 in 1908 and 4,202 in 1907, giving a birth-rate of 41.03 per mille, against 46.21 in 1908 and 42.98 in 1907.

The deaths numbered 4,085 (2,594 males and 1,491 females) giving a death-rate of 41.46 per mille, against 47.88 per mille for 1908 and 38.28 for 1907.

Of this number, 1,220 were of infants under one year of age showing a percentage of 29.86 of the total deaths, against 29.94 per cent in 1908.

The chief causes of death were as follows:—

Fever (not specified)	...	...	1,931	against	1,939	in	1908.
Malarial Fever	...	...	175	„	170	„	
Convulsions	...	...	1,036	„	1,260	„	
Beri-beri	...	...	219	„	227	„	
Dysentery and Diarrhœa	...	...	136	„	283	„	
Phthisis	...	...	160	„	215	„	
Child birth	...	...	61	„	72	„	
Bright's disease	...	...	44	„	—	„	
Bronchitis	...	...	49	„	—	„	

2. *Infectious Diseases*.—There was no serious illness of an infective nature reported during the year.

One case of chicken-pox occurred in the town.

3. *Beri-beri*.—524 cases were treated during the year with 52 deaths, giving a death-rate of 9.92 per cent, against 7.53 per cent in 1908 and 9.55 per cent in 1907.

Parboiled rice was used in the various Government institutions throughout the year. One case occurred at the Police Dépôt in a Malay Sub-Inspector, with a fatal result. He had been warned against Siam rice but refused to alter his diet.

4. *Municipality*.—The number of deaths within Municipal limits was 732 (461 males and 271 females).

The number of births was 623 (332 males and 291 females).

The infant mortality was 222 in children under one year of age giving a percentage mortality of 35.63 to the total births.

5. *Staff*.—Dr. HENNESSEY was transferred to the Federated Malay States on the 1st of April, and I took over from him on that date.

Assistant Surgeon DE SOUZA was in charge of the Durian Daun Hospital throughout the year.

Assistant Surgeon SEN was transferred to Singapore on the 1st of April, and was relieved by Assistant Surgeon WILLIAMS.

Assistant Surgeon PENG LOK carried out the duties of Deputy Registrar of Deaths during the year.

6. *Government Hospitals*.—3,115 cases were treated during the year, against 4,348 in 1908 and 3,880 in 1907.

There were 350 deaths giving a percentage of 11.23, against 9.61 in 1908 and 8.99 in 1907.

Durian Daun Hospital.

Buildings.—The various latrines, etc., were limewashed and tarred and minor repairs carried out during the year. The floor of Ward No. 1 was renewed, and the ward painted and limewashed.

The new mortuary is nearly completed. Provision is being made for the collection of post-mortem washings.

General Hospital.

European Ward:—

Remained, 1st January, 1909	...	...	...	Nil.
Admitted, 1909	...	...	...	23
Discharged	...	...	...	21
Died	...	...	...	1
Remaining, 31st December, 1909	...	...	...	1
Average daily sick	...	...	...	0.37

Native Ward:—

Remained, 1st January, 1909	...	...	...	3
Admitted, 1909	...	...	...	204
Discharged ...	...	...	...	198
Absconded ...	...	...	...	2
Died ...	...	...	...	2
Remaining, 31st December, 1909	...	...	...	5
Average daily sick	...	...	...	7.08
Percentage of deaths to total treated	...	...	...	0.96

Chief diseases treated:—

	<i>Cases.</i>	<i>Deaths.</i>	<i>Percentage of Deaths.</i>
	—	—	—
Beri-beri ...	16	Nil.	Nil.
Benign Tertian ...	19	"	"
Sub Tertian ...	9	"	"
Quartan ...	1	"	"
Pyrexia of uncertain origin	13	"	"
Secondary Syphilis ...	14	"	"
Ulcers ...	19	"	"
Eczema ...	13	"	"
Observation ...	20	"	"
Dysentery ...	4	1	25%
Gun Shot wounds ...	3	1	33.33

Pauper Hospital.

Remained, 1st January, 1909	...	...	...	203
Admitted, 1909	...	...	...	1,831
Discharged	...	...	...	1,592
Absconded	...	...	...	29
Died ...	...	...	...	257
Remaining, 31st December, 1909	...	...	...	156
Average daily sick ...	...	...	...	200.19
Percentage of deaths to total treated	...	...	...	12.63

Chief diseases:—

	<i>Cases.</i>	<i>Deaths.</i>	<i>Percentage of Deaths.</i>
	—	—	—
Beri-beri ...	325	36	11.07
Benign Tertian ...	175	4	2.28
Sub Tertian ...	165	16	9.69
Secondary Syphilis ...	136	9	6.61
Phthisis ...	65	49	75.38
Dysentery and Diarrhoea	84	48	57.14
Cirrhosis of Liver ...	15	8	53.33
Ulcers ...	420	1 (Suicide by hanging)	0.23
Nephritis ...	44	21	47.72
Scabies ...	40	Nil.	Nil.
Ankylostomiasis ...	49	21	42.85
Observation ...	87	Nil.	Nil.
No appreciable disease	33	"	"

A microscopic examination of the blood in all fever cases has been carried out throughout the year. The stools of a large number of patients have also been microscopically examined.

Operations.—One hundred and three operations were performed during the year. The major operations included Amputation of limbs 5, Radical operation for hydrocele 4, Hæmorrhoids 1, Incision of joints 2, Amputation of penis 1, Suprapubic lithotomy 4, Median lithotomy 1.

Necropsies.—Seventy-five (16 Medico-legal) were made during the year.

Gaol Hospital.

The general health of the prisoners has been good. There were 16 admissions into hospital for the following diseases:—Beri-beri 2, Dysentery 3, Diarrhœa 6, Malarial Fever 1, Phthisis 2, Orchitis 1, Abscess 1. There were two deaths (Dysentery, Phthisis). The average daily number of prisoners was:—Civil 4·95, Criminal 22·88, House of Detention 5·06.

Leper Asylum.

There were no admissions during the year.

District Hospitals.

Alor Gajah.

Buildings.—No alterations or additions were made during the year.

There were 3 admissions into the emergency ward, 2 suffering from injuries, and 1 from Dysentery. The latter case died.

Jasin.

Buildings.—The buildings underwent limewashing, and the usual minor repairs. In July, Ward I heeled over slightly owing to a violent windstorm. The wooden posts supporting the roof have been replaced by brick pillars. A new kitchen has been built behind Ward II. The old kitchen and out-houses situated between the two wards have been demolished. A covered way has been built leading from the wards to the kitchen.

Patients:—

Remained, 1st January, 1909	...	...	...	78
Admitted, 1909	...	...	...	752
Discharged	...	...	...	669
Absconded	..	...	...	20
Died	...	...	...	87
Remaining, 31st December, 1909	...	...	...	54
Average daily sick	...	...	...	71·41
Percentage of deaths to total treated	...	...	...	10·48
Excluding cases that died within 24 hours, the percentage is				9·04

The chief diseases treated:—

Beri-beri	...	...	181	with	16	deaths
Malarial Fever	...	...	181	„	8	„
Ulcer	...	...	164	„	3	„ (Phagedæna)
Syphilis	...	...	38	„	—	„
Nephritis	...	...	31	„	10	„
Dysentery	...	...	29	„	7	„
Ankylostomiasis	...	...	21	„	5	„
Pneumonia	...	...	11	„	8	„
Phthisis	...	...	18	„	10	„
Diarrhœa	...	...	10	„	2	„
Injuries	...	...	17	„	—	„

The nationalities of those treated in hospital were :—

Chinese	...	...	...	...	524
Malays	...	...	...	...	31
Tamils	...	...	...	...	190
Sikhs	...	...	...	...	7

There were 181 cases of Beri-beri treated during the year with 16 deaths, a percentage of mortality of 8.84. Of these 5 died within 24 hours of admission. Deducting these, the death-rate falls to 6.08. Parboiled rice was used throughout the year. No cases arose in hospital.

The hospital was overcrowded in the early part of the year. Since then, the numbers have been gradually decreasing owing to the opening of a new hospital on Diamond Jubilee Estate, 5 miles away.

There were 19 Necropsies during the year (10 Medico-legal).

Quarantine Camp.

Remaining, 1st January, 1909	...	...	...	Nil.
Admitted, 1909, (Chicken-pox and observation)	...	...	...	2
Discharged	...	...	...	2
Remaining, 31st December, 1909	...	...	...	Nil.
Average daily sick	...	...	...	.04

APPENDIX E.

Hospitals for Women.

Kandang Kerbau Hospital, Singapore.

REPORT BY MR. C. V. NORRIS, *Assistant Surgeon*.

The following table shows the work done during the year 1909 :—

Remained at beginning of the year	...	...	...	36
Admitted during the year	...	...	...	163
Died	...	...	...	36
Remaining at end of the year	...	...	...	33

Seventy-seven Japanese, 63 Chinese and 23 Indians were admitted during the year.

The average daily sick was 36.8 and the death-rate 18.9 per cent.

The principal admissions were for :—

Secondary Syphilis 26 with deaths 5. Other venereal affections 23. Pulmonary Tuberculosis 19 with deaths 19.

Pauper Wards.

One hundred and ninety-nine patients were admitted into the hospital, 22 remained from the previous year, giving a total treated of 221.

The daily average sick was 30.9 and the percentage of deaths to total treated was 23 per cent.

Nationalities :—

Chinese	...	...	...	...	94
Malay	...	...	...	...	22
Eurasian	...	...	...	...	22
Tamil	...	...	...	...	54
Others	...	...	...	...	6
European	...	...	...	...	1
Total					199

Chief diseases treated were:—

					Cases.	Deaths.
					—	—
Malaria	...	..	...	...	23	2
Syphilis	...	...	...	...	15	3
Pulmonary Tuberculosis			...	...	15	8
Anæmia	...	...	...	...	9	5
Bronchitis	...	...	...	...	15	7
Diarrhœa	...	...	...	...	7	6
Injuries	...	...	...	...	20	—

Most of those admitted had no homes and many were picked off the streets and brought in to die.

Penang.

REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer.*

During the year 109 patients as follows:—

Japanese	...	...	...	...	...	21
Chinese	...	...	...	...	...	54
Tamils	...	...	...	...	...	34

were admitted as against 102 in 1908. The admissions with Venereal Disease were 59 of which 53 were prostitutes. There were 9 deaths during the year as against 8 in 1908.

Nationalities.			Remained.	Admitted.	Total.	Discharged.	Transferred.	Absconded.	Died.	Remaining.
Japanese	...	...	3	21	24	20	Nil.	Nil.	3	1
Chinese	...	...	4	54	58	48	...	...	3	7
Tamil	...	...	2	34	36	25	...	...	5	6
Total			9	109	118	93	Nil.	Nil.	11	14

Annual return of patients admitted into the Lock Hospital with venereal diseases for the year 1909.

No. of admissions with venereal diseases.	No. of Prostitutes.
59	53

Province Wellesley.

REPORT BY DR. W. S. SHEPPARD.

There were no admissions under this head.

Malacca.

REPORT BY DR. E. G. WEIR.

Eight Prostitutes (7 Cantonese and 1 Japanese) were under treatment for Venereal Diseases.

APPENDIX F.

OUT-DOOR DISPENSARIES.**Singapore.**REPORT BY MR. F. CLARKE, *Assistant Surgeon.*

1. I took charge of this dispensary on August 9th, Assistant Surgeon PESTANA going on leave.

2. The number of patients who attended the dispensary was 11,172, an increase of 77 on the number for the previous year.

3. The dispensary was opened 298 days, the average daily attendance being 116.37.

4. The fees collected amounted to \$3,187.40.

5. The principal diseases treated were:—

Malaria	...	...	...	...	2,295
Venereal Diseases	...	...	...	...	1,679
Rheumatism	...	...	...	...	290
Bronchitis	...	...	...	...	650
Dyspepsia	...	...	...	...	522
Ulcers	...	...	...	...	1,211
Injuries	...	...	...	...	565

6. The nationalities of the patients were:—

Europeans	...	...	...	...	45
Eurasians	...	...	...	...	799
Chinese	...	...	...	...	5,183
Malays	...	...	...	...	1,000
Indians	...	...	...	...	3,498
Jews and others	...	...	...	...	647

Penang.REPORT BY DR. F. B. CROUCHER, *Senior Medical Officer.*

1. Appended is a comparative statement of the work done during the year.

1. The patients treated during the year 1909 numbered 7,693 as against 7,179 for the previous year, an increase of 514.

3. The dispensary was open for 310 days during the year, the daily average number of visits being 48.4, as against 46.93 in 1908. The total receipts for the year amounted to \$921.60.

4. This institution continues to be well appreciated by the poorer class of natives.

5. The principal diseases treated were:—

Malaria	...	...	...	...	...	633
Pyrexia	...	...	...	...	...	1,055
Rheumatism	...	...	...	...	...	673
Syphilis	...	...	...	...	...	142
Bronchitis	...	...	...	...	...	194
Diarrhoea	...	...	...	...	...	186
Dyspepsia	...	...	...	...	...	201
Ulcer	...	...	...	...	...	669
Injuries	...	...	...	...	...	625

6. The nationalities of those treated compared are as follows:—

				1908.	1909.
				—	—
Europeans	...	...	...	87	47
Eurasians	...	...	...	147	276
Chinese	...	...	...	1,809	2,406
Malays	...	...	...	2,395	2,266
Natives of India	...	...	...	2,629	2,539
Others	...	...	...	112	159
Total	...	...	...	<u>7,179</u>	<u>7,693</u>

Comparative statement showing the number of patients treated at the Government Out-Door Dispensary, from 1900 to 1909.

—	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Number of patients attended	4,320	4,286	4,894	4,909	5,826	6,504	7,046	6,876	7,179	7,693
„ of visits paid	8,076	7,904	8,269	9,709	11,860	11,259	11,427	11,990	14,362	15,004
Patients treated free	1,014	1,214	1,700	1,500	2,026	2,624	3,353	3,095	3,077	3,436
Pauper patients	190	218	170	160	252	218	278	196	319	616
Paying patients	3,116	2,854	3,024	3,249	3,548	3,662	3,415	3,585	3,783	3,641
Average visits per diem	27.56	26.70	27.80	32.69	39.53	38.16	38.44	40.50	46.93	48.4
Number of days dispensary open	293	296	296	297	300	295	298	296	306	310
Receipts for the year	\$ 684.30	617.10	643.40	752.05	795.10	840.56	768.26	866.90	972.15	921.60

Balik Pulau.

1. During the year 583 patients presented themselves for treatment as compared with 282 for the previous year.

2. The following table gives statements of the work done as compared with previous year:—

				1909.	1908.
				—	—
Number of patients	...	...	...	583	282
„ Government servants	...	...	...	199	38
„ indigent patients	...	...	...	96	87
„ paying patients	...	...	...	288	157
„ males	...	...	...	389	243
„ females	...	...	...	194	39
„ visits	...	...	...	3,171	552
Average of visits per day	...	...	...	5.96	1.51
Receipts for the year	...	...	...	\$43.45	\$17.10

3. The nationalities of those treated were:—

<i>Nationality.</i>	<i>Males.</i>	<i>Females.</i>	<i>Total 1909.</i>	<i>Total 1908.</i>
Europeans	9	2	11	4
Eurasians	9	2	11	2
Chinese	177	132	309	193
Malays	64	18	82	41
Natives of India	129	36	165	41
Others	1	4	5	1
Total ...	389	194	583	282

4. The chief diseases were:—Malarial Fever 175, Constipation 38, Ulcer 45, Ringworm 18, Eczema 15, Otitis Media 10, Rheumatism 12, Conjunctivitis 13, Intestinal Worms 80.

Dindings.

The number of cases treated during the year was 762, against 496 in the previous year, an increase of 266. Malarial Fever and Skin diseases form the bulk of those treated.

OUT-DOOR DISPENSARIES.

Malacca.

The number of patients treated was 2,775, against 2,303 in 1908. The receipts amounted to \$701.70, against \$639.66 for 1908.

Nationalities:—

			<i>Males.</i>	<i>Females.</i>
Europeans	...	...	93	30
Eurasians	...	...	272	309
Chinese	...	...	668	230
Malays	...	...	591	159
Natives of India	...	...	291	94
Others	...	...	1	37

*Chief Diseases treated:—*Beri-beri 287, Dysentery 35, Diarrhœa 107, Malarial Fever 233, Pyrexia 325, Syphilis 89, Bronchitis 287, Phthisis 57, Dyspepsia 127, Colic 102, Asthma 57, Gonorrhœa 81, Skin diseases 90, Injuries 254, Minor operations 16.

Jasin.

Number of patients treated 651, against 1,119 in 1908. Receipts \$57.22, against \$102.24 in 1908.

Nationalities:—

			<i>Males.</i>	<i>Females.</i>
Europeans	...	...	30	Nil.
Eurasians	...	...	15	"
Chinese	...	...	197	2
Malays	...	...	163	37
Indians	...	...	187	20
Others	...	...	Nil.	Nil.

*Chief Diseases treated:—*Malaria 258, Syphilis 24, Beri-beri 26, Bronchitis 23, Skin diseases 45, Injuries 132, Dysentery and Diarrhœa 10.

Alor Gajah.

Number of patients 332, against 485 in 1908. Receipts \$28.70, against \$29 in 1908.

Nationalities:—

				<i>Males.</i>	<i>Females.</i>
Europeans	...	...	...	Nil.	Nil.
Eurasians	...	...	...	13	2
Chinese	...	...	...	68	1
Malays	...	...	...	169	43
Indians	...	...	...	29	7

*Chief Diseases treated:—*Malaria 56, Beri-beri 11, Bronchitis 9, Dysentery and Diarrhoea 6, Injuries 135, Skin diseases 26.

APPENDIX G.

VACCINATION.

Singapore.

The number of vaccinations performed by the public vaccinator was 2,533, of which 1,803 were infants under one year of age. Of the total number vaccinated 1,217 were males and 1,316 females. Of these 1,616 were within town limits and 917 in country districts.

The largest number vaccinated in any one month was 250 in the month of March, and the smallest number was 140 in January. All vaccinations were successful.

In addition to the above 1,870 vaccinations were performed by the licensed vaccinators of which 10 failed.

As usual no returns from the private medical practitioners have been received. Such returns will be asked for and included in future.

Penang.

The total number of vaccinations performed by the public vaccinator during the year 1909 in the town and country districts of Penang was 3,020, 97.25 per cent of these operations were successful.

The sub-joined Table shows the Number vaccinated during the past Five Years and the Number of Births registered:—

YEAR.	Vaccinations in town and country districts.	Percentage of successful cases.	Total births registered.
1905	3,446	87.76	2,613
1906	3,311	90.72	2,215
1907	2,753	95.20	2,310
1908	3,369	98.24	2,942
1909	3,020	97.25	2,706

Four hundred and twenty-seven cases were reported by the various medical practitioners in Penang as having been successfully vaccinated by them.

Province Wellesley.

The number of cases vaccinated was 3,795 (2,114 males and 1,681 females).

Table showing Nationalities.

I		Europeans.	Eurasians.	Chinese.	Malays.	Hindus.	Others.	Total.
Perfect	...	...	6	499	2,518	398	19	3,440
Modified	...	...	...	30	119	29	1	179
Failed	...	...	...	32	95	25	2	154
Not seen	...	...	...	3	17	2	...	22
Total	...	...	6	564	2,749	454	22	3,795
		...	...	5'67	3'45	5'50	9'09	4'05

Percentage of Failures to Total Vaccinated.

Northern.	Central.	Southern.	For the three Districts.
3'29	2'99	7'55	4'05

Malacca.

The total number of vaccinations performed during the year was 3,133, against 3,428 in 1908.

The following table gives the detailed results :—

	No.	Perfect.	Modified.	Failed.	Not seen.
	—	—	—	—	—
Town	...	547	539	7	1
Country	...	2,586	2,543	18	24

The percentage of failures was 0'79, as against 1'25 in 1908 and 1'33 in 1907.

Nationalities :—

Europeans	...	...	...	...	0
Eurasians	...	...	...	...	44
Chinese	...	...	...	...	530
Malays	...	...	...	...	2,511
Indians	...	...	...	...	24
Others	...	...	...	...	24

Dindings.

One hundred and fifty-three children were successfully vaccinated during the year with 7 failures, against 144 vaccinations and 4 failures for the previous year.

APPENDIX H.

Quarantine.

REPORT BY DR. G. E. BROOKE, *Port Health Officer.*

1. *Port.*—During the year 1,251 visits were paid to vessels by the Department and included the examination of 77,304 crew units, and of 214,321 passengers.

2. Of these ships 27 were infected.

Small-pox	...	...	...	...	...	17
Plague	...	...	...	...	...	3
Cholera	...	...	...	...	...	6
Double infection	...	...	...	...	...	1

Five of the above small-pox infections occurred on ships returning from Jeddah.

3. The disinfecting lighter *Hygeia* was used for disinfecting on 29 occasions, including one Beri-beri ship and one clean ship clearing for Australia.

When Singapore is healthy the disinfection of ships sailing for Australia would seem to be superfluous, but is now required by the sanitary authorities although no notice is taken of the passengers or their baggage.

4. The *Hygeia* also proved very useful in transport service, being used on 18 occasions for changing the monthly Police guard at St. John's and for conveying heavy stores to the quarantine station.

5. One visit was paid to Pulau Bukom in October to enquire into a supposed case of infectious disease.

6. Ten visits were paid to the Marine Department lines at Pulau Brani either to visit the sick or to enquire into infectious disease, death or insanitary conditions. There has been a considerable improvement in the health of the men stationed there.

7. A suspicious case of cholera being reported from Horsburgh lighthouse, I proceeded there on 27th January, and found two cases of Dysentery. The lighthouse was inspected and certain recommendations made for the improvement of the sanitary condition and diet.

8. On 9th April (Good Friday) a Chinese junk was reported from Tanjong Katong as having been attacked by pirates during the previous night. This vessel I had brought to the Master Attendant's Pier and found five dead and four injured Chinese, all the dead having been mutilated. The injured were sent to the General Hospital for treatment and the dead to Tan Tock Seng's Hospital for post-mortem and inquest.

9. The state of health of 5,876 incoming vessels (not in quarantine) was ascertained for me by the courtesy of the Marine Department, who presented certificates for signature by the Surgeon or Master of each vessel. In this way the Department is cognizant of the state of health of every ship arriving in Singapore.

These certificates quoted 282,851 crew and 289,084 passengers.

10. Cases of deaths on sampans or steamers in port occurred to the number of 45. All of these were investigated. 36 permits to bury were issued and the remaining 9 were sent to St. John's for post-mortem and burial.

11. Permission to export bodies for burial in China, or to import bodies for burial here, was given in 21 cases, the proper formalities as to disinfection and sealing of the coffin having, in each case, been complied with.

12. An inspection of several of the smaller steamers was made with a view to improving their sanitary condition.

13. The inspection of the water lighters and water boats which supply water to the shipping was begun towards the close of the year and will be regularly maintained. It is hoped that by this means the water supply of the shipping will be improved and made reliable.

14. *Office and Shore Work.*—Bills of health to the number of 1,299 were issued by the Department. The fee of \$5 for each is collected by stamps.

15. One hundred and fifty sick amongst the Marine Department Staff were treated in the office. They comprised :—

Surgical cases...	...	...	...	...	27
Malarial ...	...	...	...	...	73
Other complaints	...	...	...	...	50

16. As Deputy Health Officer for the Island of Singapore 6 cases of infectious disease, occurring in the country or in Government buildings of the town, were dealt with.

These were :—

Small-pox	...	...	...	...	3
Diphtheria	...	...	...	...	1
Cholera	...	...	...	...	1
Enteric	...	...	...	...	1

17. To accommodate the Municipality we remove their infectious disease contacts to St. John's for observation at our Quarantine Station. During the year, the number so removed were :—

Cholera contacts	...	...	...	...	279
Small-pox „	...	...	...	...	174
Plague „	...	...	...	...	33

18. A considerable amount of pathological work was done in the office laboratory, such as examination of several hundreds of blood films, smears, etc. Arrangements were also made to improve the plant for water analysis.

19. *Quarantine Station.*—The Quarantine Station was in occupation during every day of the year.

20. The total passengers landed were 15,072.

21. The maximum number on any day was 2,007.

22. The total sick treated in Hospital were 775 ; the average daily number of sick being 22.72 and the maximum number on any day, 60. When the Hospitals are full the whole island is generally full.

23. The death-rate amongst the sick was 4.67 per cent ; and the total number of deaths, 36.

24. The rainfall was 77.11 inches.

25. The number of vaccinations done was 1,084.

26. Throughout the year the distilling plant worked well and was kept in excellent order by the engineer. By judicious management we were able to supply distilled water for drinking and cooking throughout the whole year without having to obtain any from Singapore.

The water in the Reservoir on 1st January amounted to 49,284 gallons ; and during the year a total of 512,775 gallons were distilled, thus giving the total water available as 562,059 gallons.

27. The amount of distilled water actually used by passengers and staff was 512,331 gallons, giving a mean daily average for the year of 8.1 gallons per head. This is nearly one gallon more than we supplied on the previous year.

28. In addition to the above, plentiful rainwater is supplied for washing purposes.

29. Wards I to VI, which were in very bad repair, have been practically rebuilt and 22 tanks (of 400 gallons each) affixed to provide a supply of rainwater for washing purposes.

30. The laundry was completed and is now working well. There has been great need for such a building since, in previous years all the quarantine station washing had to be sent to Singapore and the possibility of the spread of infection thereby much increased.

31. Considerable areas near the Police barracks and in the hospital compound have been cleared and cultivated with a view to keeping down the lallang grass and preventing the formation of mosquito-breeding places.

32. Throughout the year there has been steady and continuous work by our staff, on the reclamation of the main swamp. Highly satisfactory progress had been made, and within another year the whole work will probably be completed.

33. *Staff.*—Dr. WELLINGTON, who had been in charge of the island for many months and did excellent work there, was transferred to the Native States on 12th May and was succeeded by Dr. RATTRAY on the same date.

34. The subordinate staff as a whole worked well.

35. In the Port Health Office a succession of Medical Officers came to act as Assistant Port Health Officer, viz.: Doctors WELLINGTON, SMITH, SCANLON and ROBINSON.

36. Mr. SINHA was attached as Assistant Surgeon in the early part of the year and did reliable work. He was succeeded successively by Messrs. HOGAN and SEN.

37. I attach a condensed résumé on the department's work for the past seven years.

Résumé of the past Seven Years' Work.

YEAR.	Crews and passengers examined.	Passengers landed on St. John's.	Visits to Vessels.	Bills of Health issued.	Small-pox treated.	Cholera treated.	Plague treated.	Haffkine's Inoculations.	Vaccinations on St. John's.
1903 ...	321,365	21,253	806	1,000	19	271	136	761	140
1904 ...	279,297	17,852	712	1,036	46	Nil.	9	745	4,623
1905 ...	323,431	12,109	1,279	1,220	62	2	5	223	2,586
1906 ...	493,021	30,076	1,625	1,674	37	319	2	113	6,963
1907 ...	377,326	25,408	1,226	1,318	37	28	Nil.	Nil.	3,157
1908 ...	303,484	29,356	1,506	1,344	52	36	3	Nil.	9,016
1909 ...	291,625	15,072	1,251	1,299	17	Nil.	Nil.	Nil.	1,084
Total ...	2,697,449	168,794	9,306	8,891	275	1,345	155	1,842	27,569

QUARANTINE.

Penang.

REPORT BY DR. J. C. C. FORD, *Medical Officer.*

Harbour.—Five hundred and three vessels with 43,135 members of crew and 118,836 passengers were medically inspected. Under the Pilgrim Ships' Ordinance 7 vessels were inspected and cleared for Camaran and Jeddah; the number of the pilgrims embarking at this port was 4,027. Six vessels with Hadjis, returning from the Hedjaz, arrived during January, February and March; four of these "return" vessels were infected with Small-pox.

The number of vessels, passengers and crew units visited in each month of the year will be seen in Table *A*.

In Table *B* is shown the number of vessels arriving from ports subject to quarantine restrictions, in each month.

Seven deaths occurred on vessels and in tongkangs within harbour limits. Permits for landing and burial ashore were granted after view and investigation.

In accordance with section 18 of "The Quarantine Rules 1908" 1,861 passengers were permitted to leave vessels, with written undertakings to submit to daily inspection. 16 vessels arrived with disease.

<i>Small-pox.</i>	{	2 from China	...	...	4 from Jeddah.
		2 „ Negapatam	...	...	2 „ Rangoon.
		1 „ Calcutta	...	...	1 „ Padang (Sumatra).
<i>Cholera.</i>		2 „ Calcutta			
<i>Plague.</i>		2 „ Calcutta			

One European female saloon passenger was landed with confluent Small-pox from a Rangoon vessel. She was treated in the Quarantine Camp, Jelutong, and succumbed to the disease in a week.

The s. s. *Persia* arrived from Bombay on 3rd June, 1909, with one of the European crew ill with Bubonic Plague (glands of neck), the patient expired on board soon after the arrival of the vessel.

Quarantine Station, Pulau Jerejak.—The station was in continuous use. The number of passengers detained for observation, sickness, etc., was 23,058 from 248 vessels. The maximum number in detention on a single day being 1,929, of whom 1,321 were from Negapatam under observation for small-pox. The average daily number in detention was 359.

Table *C* gives the occupation of the station during each month of the year.

The following diseases were treated on the Quarantine Station:—

				<i>Cases.</i>	<i>Deaths.</i>
				—	—
Small-pox	...	...	...	25	5
Cholera	...	...	...	2	1
Plague	...	...	...	1	Nil.
Chicken-pox	...	...	...	20	Nil.
Other diseases	...	...	...	130	4
Total cases treated	...	...	...	178	
Deaths	...	...	...	10	
Percentage of deaths to total number treated				5.6	

Nineteen cases of Small-pox were landed from vessels and 6 other cases occurred among 2,420 contacts. No further cases of Cholera and Plague occurred among the contacts, after the cases had been isolated.

Vaccinations to the number of 5,614 were done by the Quarantine Staff on the island.

Personnel and Staff.—I was in charge of the Quarantine Station throughout the year with Mr. BRUCE as Assistant Surgeon.

The health of the staff, as well as that of the Sikh guard which is relieved every month, was good. One Sikh police constable who was on duty about the Small-pox Hospital, developed modified Small-pox.

Buildings, etc.—An extra standpipe was erected in the northern half of the Central Camp.

Quarters were erected for the "Disinfecting Engineer."

The Assistant Surgeon, who had been resident at the Leper Asylum, Pulau Jerejak, moved into quarters at the Quarantine Station.

The infectious disease hospital was demolished. Infectious cases are now treated in an atap shed at the extreme south end of the island.

Two long wards in the Central Camp were vacated during the year and have been substantially rebuilt for the ultimate reception of female lepers.

The iron fencing between the North and South divisions of the Central Camp was renewed and new fencing was erected around the Assistant Surgeon's and Dressers' quarters.

There was a plentiful supply of water from the Central Reservoir all through the year.

TABLE A.

MONTHS.			No. of Vessels.	No. of Crews.	No. of Passengers.
January	...	...	82	4,659	11,005
February	...	...	51	3,730	10,394
March	...	...	40	3,657	9,409
April	...	...	41	3,973	11,775
May	...	...	34	3,610	11,193
June	...	...	28	3,007	9,985
July	...	...	39	3,234	8,827
August	...	...	36	2,396	6,837
September	...	...	40	3,541	11,056
October	...	...	36	3,573	9,801
November	...	...	36	3,646	8,535
December	...	...	40	4,109	10,019
			...	...	...

TABLE B.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
<i>India</i> —Bombay ...	4	4	6	4	4	4	4	4	5	3	5	6	53
Calcutta ...	6	6	6	6	7	4	5	6	5	6	6	6	69
Rangoon ...	11	8	9	10	7	7	9	8	7	11	7	12	106
Moulmein...	1	2	4	1	1	1	2	1	4	2	2	...	21
Negapatam	4	4	4	5	4	4	5	4	5	4	4	5	52
Tuticurin ...	...	...	...	1	...	...	...	...	...	...	...	...	1
<i>China</i> —Amoy ...	3	2	3	6	5	3	...	...	3	4	4	4	37
Hongkong	7	6	6	7	6	5	13	11	9	5	7	7	89
<i>Straits Settlements</i> —Singapore...	45	16	...	...	...	...	...	...	...	...	...	...	61
<i>Egypt</i> —Port Said...	...	...	...	1	...	...	...	...	...	...	...	...	1
<i>Arabia</i> —From Jeddah	1	3	2	...	...	...	...	...	...	...	...	...	6
To Jeddah	...	...	...	...	...	...	1	2	2	1	1	...	7
Total ...	82	51	40	41	34	28	39	36	40	36	36	40	503

TABLE C.

MONTHS.			No. of Vessels.	No. of Passengers.	Daily Average.
January	...	...	19	1,379	173
February	...	...	20	2,272	742
March	...	...	26	3,069	633
April	...	...	30	2,302	300
May	...	...	26	3,252	584
June	...	...	21	2,766	461
July	...	...	18	1,672	216
August	...	...	22	1,264	193
September	...	...	19	1,151	152
October	...	...	17	1,180	160
November	...	...	14	908	310
December	...	...	16	1,843	386

RAINFALL—PULAU JEREJAK—1909.

January	...	...	...	...	6.38
February	...	...	...	...	5.47
March	...	...	...	...	5.03
April	...	...	...	...	5.86
May	...	...	...	...	5.12
June	...	...	...	...	11.18
July	...	...	...	...	4.56
August	...	...	...	...	7.83
September	...	...	...	...	11.59
October	...	...	...	...	14.82
November	...	...	...	...	11.55
December	...	...	...	...	1.18

Malacca.REPORT BY DR. E. G. WEIR, *Medical Officer.*

Owing to outbreaks of Cholera in Singapore in January and May, all ships coming from that port were inspected and the passengers landing here were given passports and kept under observation.

From 1st January to 1st February, 1,482 passengers were examined.

From 20 May to 13th June, 1,834 passengers were examined.

APPENDIX I.

Government Analyst's Department, Singapore.

REPORT BY DR. FRANKLAND DENT, M. SC., Ph. D., F. I. C., *Government Analyst*.

The work done by this Department continues to show a steady increase.

The following statement shows the revenue and expenditure for the year, for comparison the revenue for the preceding year (1908) is included :—

Revenue.	1908.	1909.	Expenditure 1909.	—
	\$	\$ c.		\$ c.
Petroleum Inspection Fees	6,305	4,790 00	Personal Emoluments	11,114 55
Government Analyst's Fees	6,240	6,735 50	Chemical Stores from England ...	429 87
Total ...	12,545	11,525 50	Miscellaneous Expenses	508 43
			Transport, Travelling, etc. ...	455 50
			Typewriter ...	90 00
By Sales of Pyridine ...	160	139	Total ...	12,598 35

It will be noticed that there has been a considerable falling off in the fees received for petroleum inspection, due to a decrease in the number of consignments of bulk oil imported at Pulau Bukom.

Petroleum.

(a) *Kerosine*.—During 1909 there was a slight increase in the number of tins imported but both the total number of consignments and the quantity of bulk oil show a considerable falling off compared with the preceding year.

The following statement gives a comparison between the quantities imported during the years under consideration :—

Description of Oil.	1908.			1909.		
	Number of Consignments.	Tins.	Tons.	Number of Consignments.	Tins.	Tons.
<i>Case Oil.</i>						
American Oil {	Devoes ...	7	176,090	...	5	180,000
	Sylvan ...	4	135,000	...	4	130,000
	Cock ...	...	...	...	2	13,000
Langkat Oil {	Cross ...	41	139,808	...	49	175,947
	Crown ...	57	208,754	...	59	231,335
	Dragon ...	22	398,000	...	20	388,500
	Lamp Glass..	19	66,051	...	15	56,182
	Rising Sun...	1	2,139	...	...	...
Rangoon Oil {	Silver Light..	...	...	...	2	8,927
	Gun ...	...	...	...	1	6,524
Engine Oil	Umbrella ...	...	...	...	1	15,768
	...	4	16,986	...	...	...
<i>Carried forward</i> ...	155	1,142,828	...	158	1,206,183	...

Description of Oil.	1908.			1909.		
	Number of Consignments.	Tins.	Tons.	Number of Consignments.	Tins.	Tons.
<i>Brought forward</i> ...	155	1,142,828	...	158	1,206,183	...
<i>Bulk Oil.</i>						
Aroe Bay ...	2	...	3,300	...	...	...
Balik Papan ...	14	...	31,510	4	...	7,138
Palembang... ..	3	...	3,900	1	...	514
Palau Samboe ...	25	...	1,853	15	...	551
Pulau Brandan ...	1	...	350	...	...	...
Soe-Soe	6	...	10,690	4	...	10,840
Batoum	1	...	5,070	...	...	...
Borneo	...	...	...	1	...	3,451
Pladjoe	...	...	...	1	...	500
Foo Chow	...	...	...	1	...	800
Total ...	207	1,142,828	56,673	185	1,206,183	23,794

In no case was petroleum, not previously declared to be dangerous, found to flash below the local standard.

Thirty-one cargoes were tested and certificates issued for petroleum consigned to Sarawak, Hongkong and Aden in order to avoid delay at these and intermediate ports.

Two samples reputed to be of American petroleum were sent in for examination. One of these proved to be a local one which had been exposed for sale in an old Devoe's tin.

Six samples of petroleum were sent in to be tested for their flash-points with the Standard Instrument kept for this purpose in the Laboratory, in order to verify similar instruments belonging to various companies. Two instruments were sent by the Deputy Government Analyst, Penang, for verification and correction.

(b) *Dangerous Petroleum.*—In all cases the receptacles containing the petroleum were examined on importation and were found to meet the requirements of the Ordinance and Rules thereunder.

(c) *Petroleum Residue.*—Nine consignments representing 17,111 tons were imported at Pulau Bukom as against ten consignments of 29,467 tons during the preceding year. All the samples flashed at a temperature above 150 deg. Fahrenheit.

(d) *Tank testing.*—Forty-four vessels, which had carried petroleum, were tested for vapour by means of Redwoods Standard Instrument, before being allowed to enter dry dock. In only very few cases was vapour found to be present in sufficient quantity to necessitate further cleaning and retesting.

Explosives.

Nine shipments of explosives consisting of 2,397 packages of gelignite, 600 of dynamite and 500 of blasting gelatine were tested on importation into Singapore in accordance with the Rules under "The Explosives Ordinance 1899," and with the exception of 50 cases of the last named, they all passed the prescribed tests. These 50 cases were reported as unfit for importation and they were subsequently retested with the same result in the presence of an Officer appointed by the Governor, who thereupon ordered the explosives to be destroyed.

Counterfeit Coins.

(a) *Britannia Metal.*—Twenty-two sets of exhibits in connection with counterfeiting or uttering base coin were forwarded for examination and analysis by the Police.

The total number of coins examined was 215, which comprised 82 dollars, 12 fifty-cent pieces, 24 twenty-cent pieces, 71 ten-cent pieces and 26 one-cent pieces. All the one-cent pieces and only 7 of the coins of higher value were found to be genuine. The rest were made of Britannia metal and were in various stages of manufacture, in some cases they were plated with silver.

The usual assortment of counterfeiting apparatus, including plaster of Paris moulds, boxes of Britannia metal spoons, materials used in plating, etc., accompanied many of the exhibits.

In several cases stains produced by silver nitrate and nitric acid as well as particles of Britannia metal were found on the persons of the accused.

(b) *Silver*.—During the year a large number of counterfeit silver dollars were put into circulation: in weight they differed but slightly from the standard, and the proportions of silver were more often above than below what it should have been. 82 silver dollars, in addition to those enumerated under (a) were sent in for examination and of these 12, all dated 1907, were proved by assay to be counterfeit, having a millesimal fineness varying from 821 to 935. Another dollar of correct fineness was found to have a weight of 0.233 gram above the standard, and was probably also spurious. Many of the remaining coins, although strongly suspected to have been spurious by natives, who had proved themselves exceptionally smart in detecting such coins, were found to have the correct weight and fineness and no proof could therefore be given that they were other than genuine.

In addition to the above a counterfeit fifty-cent piece of fineness 846 was sent in for assay.

Assays.

Sixty-three samples were assayed and reported upon. They included 25 for gold, 1 sample assaying 12 oz. 9½ dwt. per long ton, 16 of wolfram ore, 6 of galena, 15 of tin ore, 3 of titaniferous iron ore commonly mistaken for tin ore and 1 each of scheelite, stibrite, hematite, graphite, tin-cobalt ore, tin ore mistaken for monazite, gold concentrates and gold bullion.

A number of exhibits representing shirt studs sold locally and described as being of "real rolled gold" were received for examination and report, with one exception they were found to contain no gold at all, the exceptional case assaying 0.0008 per cent of gold.

Liquors.

(a) *Samsoo*.—Six samples from Singapore were examined and reported upon.

(b) *Rum*.—Two samples from Singapore proved to be more or less artificial products made from silent spirit.

One sample from Malacca proved to be wholly bad and the seller was fined \$200 for supplying it at under the legal minimum strength laid down in section 109 (2) (b) of "The Liquors Ordinance 1906" and for using a false trade description under "The Merchandise Marks Act."

(c) *Brandy*.—One sample from Malacca was found to have been diluted with 34 per cent of water.

(d) *Gin*.—One sample only was sent for spirit strength.

(e) *Chinese Imported Liquors*.—Twelve samples received for the determination of spirit strength showed in many cases a very high obscuration.

(f) *Medicated Wines*.—One sample from Singapore and 3 from Penang were sent for examination as to whether they should be classed as such in accordance with section 63 A (3) of "The Liquors Ordinance 1906 Amendment Ordinance 1907."

(g) *Methylated Spirits*.—One hundred and nineteen casks and 30 drums of spirit were methylated by the addition of Pyridine. 767 cases of spirit were tested and certified as being properly methylated in accordance with section 3 of "The Liquors Ordinance 1906."

Chandu.

Twenty-eight sample packages were received from various parts of the Colony for examination as to purity and weight: they all proved to be of the usual good quality and in only a few instances were the smaller hun-packets found to be slightly under the legal minimum weight.

In addition to the above, 3 samples were sent from Johore and 7 by the Singapore Police, the latter for proof as to whether they consisted of Farm chandu or not: negative evidence could only be given in 2 cases.

Eleven tins of illicit chandu were sent for determination of nett weight.

Deleterious Drugs.

(a) *Police Seizures*.—Fifty-three sets of exhibits were sent by the Police. These comprised 1,434 separate articles, including packets of morphine and cocaine salts, hypodermic syringes and needles, mixing cups, ready prepared solutions of the alkaloids, etc.

In most cases the morphine hydrochloride was found to be mixed with varying amounts of milk sugar.

The total amount of pure morphine hydrochloride amounted to 2,344 grains whilst the cocaine salt totalled 750 grains, the latter thus amounting to 24 per cent of the total weight of alkaloids, which is slightly less than last year (30 per cent).

(b) *Excise Seizures*.—Three sets were sent in by the Marine Police, the morphine was contained in 20 one-ounce packets and the cocaine in 88 one-eighth-ounce bottles.

(c) *Anti-Opium Pills*.—Nine samples were sent in for examination, in all but one sample, opium was found to be present in considerable proportions.

(d) *Other Preparations*.—A white powder from Monthon Puket was found to be a mixture of morphine and quinine hydrochlorides containing 32½ per cent of the former. A Chinese imitation chlorodyne contained chloroform but no opium.

Toxicology.

(a) *Stomachs, etc.*—Twenty-six exhibits were received for the most part from the two Singapore Hospitals.

The following table shows where they came from and the results of the investigations:—

Where from.	Opium (chandu).	Chandu Dross.	Morphine.	Laudanum.	Mercury.	No poison pre-sent.	Total.
General Hospital, Singapore ...	7	...	1	1	1	6	16
T. T. S. Hospital, Singapore ...	1	1	2	...	...	3	7
Chief Police Officer, Singapore ...	...	...	...	...	...	1	1
Secretary to Governor, B. N. B.	...	...	...	...	...	2	2
Total ...	8	1	3	1	1	12	26

The intestines of a chicken sent by the Port Health Officer, Singapore, contained no poison.

(b) *Attempted Poisoning Cases*.—In all, eight sets of exhibits were received for investigation. As is usual in such cases, they included exhausted tea-leaves, coffee dregs, curries, Chinese medicines, etc.

The most interesting case was one in which arsenic was found in certain sarongs saturated with vomit: it could not be proved, however, whether it owed its presence to the vomit or to the colouring matter contained in the sarong itself. Another case was one of poisoning fish, which were being conveyed by sea, by adding large quantities of washing soda to the water in the tanks containing them.

(c) *Attempted Robberies by use of Narcotic Drugs, etc.*—Seven sets of exhibits were sent in under this head, they included joss sticks sprinkled with sawdust and pepper, cigarettes supposed to contain chandu, a mixture of pepper and quicklime and a number of others. A “stengah,” a small quantity of which was said to have produced a deep sleep in the person taking it, proved to be quite harmless.

Blood Stains.

Thirty-seven sets of exhibits were received from the Police, they included the usual parangs, bajus, etc.

Urine.

Fifty-eight samples were sent in chiefly for the detection and estimation of albumin and sugar, they included 3 samples for the determination of the “ammonia-coefficient.”

Milk.

Twenty-two samples were received for analysis, of these 2 were found to be a mixture of buffalo's and cow's milk, 3 were adulterated with water varying from $2\frac{1}{2}$ per cent to 24 per cent, 1 was admixed with both buffalo's milk and water, for which the manager of the company supplying it was fined \$100, and 4 were tinned milks of average European quality. The rest of the samples were of good quality.

Water.

Of 16 samples received for sanitary analysis, 9 came from Singapore and of these 2 were reported as of good quality, 1 as highly contaminated by sewage, 1 as containing 2 per cent of sea-water and 5, taken from wells, as consisting for the most part of oxidized sewage. Two samples were received from Cape Rachado and 1 each from Pulau Samboe, Perak, Johore, Rhio and Pulau Batam.

Complete mineral analysis were made in the case of samples from Saigon, Bangkok and the Singapore Hot Spring.

Three samples were sent from Seremban for investigations as to their action on metal pumps, 1 of these were found to contain as much as $3\frac{1}{2}$ grains per gallon of free sulphuric acid.

Oil Cakes.

Fourteen samples of copra oil cake, 3 of illipi nuts and of pressed cake were sent in for analysis.

Damaged Cargoes.

Forty-one samples under this head were received, they included 11 of lubricating oil, 12 of beer, 5 of phosphate, 4 of carbolic acid, 3 of patent medicines, 2 each of rice and whisky and 1 each of kerosine and sugar.

Miscellaneous.

A large number of odd samples falling under no particular head were sent in for analysis and report. These included 2 samples of natural gas taken from gas springs in Java, 3 of gutta, 2 each of soil and rice, scrapings of paint used on Government buildings, 3 samples of rice cream, a piece of damaged cable, samples of butter, guano, castor oil, etc.

Staff.

Mr. J. W. HADDON, B.Sc., A.I.C., was appointed Second Assistant Government Analyst, Singapore, and assumed duties on May 21st. Mr. COWAP, B.Sc., A.I.C., Second Assistant Government Analyst, Singapore, was promoted Assistant Government Analyst, Singapore, and Mr. J. R. BROOKE, F.I.C., Assistant Government Analyst, Singapore, was promoted Deputy Government Analyst, Penang, on April 12th. On October 4th, Mr. COWAP was appointed Deputy Government Analyst, Penang, in place of Mr. BROOKE, transferred to Singapore for special duty and Mr. HADDON was promoted Assistant Government Analyst, Singapore, in place of Mr. COWAP.

Government Analyst's Department, Penang.

REPORT BY MR. J. C. COWAP, B. SC., A. I. C. *Deputy Government Analyst, Penang.*

The laboratory was opened as part of an organized department on June 1st, 1909, under Mr. J. R. BROOKE, F.I.C., F.C.S.

The number of reports on general analytical work issued since then was 63, while that of the reports on petroleum tested was 42.

The total revenue was \$2,189.54, inclusive of 29 cents deposit fine.

The following table shows details of the revenue and expenditure:—

<i>Revenue.</i>			<i>Expenditure.</i>		
	\$	c.		\$	c.
Petroleum Inspection fees ...	1,697	00	Personal Emoluments ...	3,165	06
Government Analyst's fees ...	207	00	Chemical Stores from		
Certificate for export of petro-			England ...	200	00
leum fees ...	285	25	Contingent Expenses ...	188	67
Deposit Account (Fine) ...	0	29	Travelling and Personal		
			Allowances ...	89	68
			Special Expenditure ...	2,305	38
Total ...	2,189	54	Total ...	5,948	79

Petroleum.

The quantity of kerosine imported into Penang, between the 1st June and 31st December, 1909, samples of all shipments being tested in the laboratory is shown in the table below:—

<i>Description of Oil.</i>		<i>Number of</i>	<i>Tins.</i>	<i>Tons.</i>
		<i>Consignments.</i>		
American Oil	{ Devoes ...	1	15,000	...
	{ Sylvan ...	2	55,000	...
Langkat Oil	{ Crown ...	5	48,276	...
	{ Dragon ...	17	211,600	...
	{ Lamp Glass ...	6	15,523	...
Burma Oil	{ Watch ...	1	35,331	...
	{ Umbrella ...	2	22,775	...
	{ Gun ...	2	5,085	...
Balik Papan ...	...	1	...	310
Pulau Brandan ...	...	1	...	629
Pulau Samboe ...	...	1	...	510
Pulau Sosoe ...	...	1	...	5,285
Pulau Bukam ...	...	1	...	357½
Petroleum Residue ...	...	1	...	5,410
Total ...		42	408,590	12,501½

On no occasion was oil, not imported as dangerous petroleum, found to be below the standard flash point (73° F.) although several consignments were found to flash at 73° exactly.

All receptacles containing petroleum declared to be dangerous were examined on importation to see that they complied with the Ordinance.

Explosives.

One sample of gelignite representing 320 packages was tested.

Counterfeit Coins.

Eight sets of exhibits were sent up by the Police, in connection with counterfeiting coins.

The number of coins examined was 58, most of them being the usual Britannia metal counterfeits, the remainder were counterfeit silver dollars. Some of these contained more silver than the genuine dollar.

In one case stains of the chemicals used in coining were found on the person and clothes of the suspected counterfeiter.

Methylated Spirits.

Five lots of spirit have been examined and certified to be methylated.

Chandu.

Seventeen samples of chandu prepared by the Farmer were examined. The chandu itself was of good quality in every case, but several of the smaller packets were found to be deficient in weight. On one occasion the weights used in the Farm Offices were tested and found to be correct.

Liquors.

Two samples of samsoo were examined and found to be of good quality. Five samples of spirits were sent by the Police for identification and were shown to be samsoo. One sample of beer was examined and reported upon. Seven samples of toddy which were suspected of having caused dysentery were examined.

Deleterious Drugs.

Twenty sets of exhibits were received for examination from the Police. These comprised 263 exhibits, consisting chiefly of hypodermic syringes, packets of drugs, cups, etc. The total amount of morphine hydrochloride thus dealt with was 676 grains, while the weight of cocaine hydrochloride was 263 grains.

Other Drugs.

One sample of chloroform was examined and reported upon. A bottle of Chinese "medicine" sent by the Police for investigation proved to consist largely of asafœtida and a much advertised remedy was found to contain a considerable amount of opium. The vendor was fined for selling this without a licence.

Water.

Two samples of water were examined, 1 of which received from Province Wellesley was reported as doubtful.

Milk.

Eight samples were received, chiefly from hospitals. One of these contained at least 8·3 per cent of added water. Proceedings which resulted in a fine of \$100 were taken against the vendor. Of the remaining 3 were probably adulterated with water, but as the quality was above that of the low English standard no action could be taken.

Stomachs, etc.

Three stomachs in cases of suspected poisoning were received. These came from the Senior Medical Officer, Penang, Medical Officer, Province Wellesley, and Chief Police Officer, Penang. One was found to contain no poison and the other 2 contained, respectively, opium and the poison from tuba root.

In addition the stomach of a horse together with samples of food, etc., was sent in by the Police but nothing in any way suspicious was found.

Other Poisoning Cases.

In 2 lots of exhibits sent in connection with suicides, chandu was found. In another case a gentleman suspected his food of having been poisoned but the poison was shown to be ordinary washing soda. An infant's food suspected of having been tampered with was proved merely to have fermented. Another interesting case occurred in which several jars of drinking water had been mixed with some substance apparently intended to poison. The substance was recognized as bamboo hair. A number of articles of clothing and the person of a prisoner were examined in an acid-throwing case.

Blood Stains.

Seven exhibits were sent in for examination. Blood was found on 4 of them.

Miscellaneous.

The miscellaneous samples included 3 tins of kerosine oil in a case of substituting oil of an inferior brand for a better, and 5 samples of condensed milk in a similar case, a gun in a murder case, 1 sample of granite, 2 of guano, 1 of patent roofing, etc.

Personnel.

On October 2nd, Mr. BROOKE left for Singapore in order to take up special duties and on October 4th, I was appointed Deputy Government Analyst in his place.

On November 1st, I was appointed Analyst to the Government Opium Monopoly in addition to my other duties. Since then a large proportion of my time has been spent at the Chandu Factory at Sungai Pinang and a considerable amount of work has been carried out in the laboratory in connection with this, and in testing the finished product.

APPENDIX 7.

Annual Report of the Straits and Federated Malay States Government Medical School for 1909.

REPORT BY DR. R. D. KEITH, *Principal*.

A. *Full course for the L. M. S. Diploma.*

1. *Numbers, etc.*—Twenty new students joined this course of whom 7 were Chinese, 10 Tamils, 2 of other Indian races and 1 Malay. Four joined as student Assistant Surgeons, 12 as holders of scholarships, and 4 as private students. Two had obtained the senior Cambridge certificate, 9 the junior, 6 passed the compulsory preliminary examination and 3 passed partly the junior Cambridge examination and partly compulsory preliminary.

In all, there are at present, 72 full course students distributed as follows:—

1st year	...	...	...	...	...	20
2nd „	...	...	...	...	...	13
3rd „	...	...	...	...	...	12
4th „	...	...	...	...	...	10
5th „	...	...	...	...	...	17

Of these, 39 are Tamils, 20 Chinese, 7 Eurasians, 2 Malays, 2 Japanese, 1 Sikh, and 1 European.

There are 13 private students, 38 scholarship students, and 21 student Assistant Surgeons.

Of the student Assistant Surgeons, the Straits Government sent 5, the Perak Government 6, the Negri Sembilan Government 6, the Pahang Government 3 and the Selangor Government 1.

2. *Resignations, etc.*—Four students were allowed to resign during the year; 3 of these had proved unsatisfactory and 1 wished to proceed to Europe to study. Six have had their scholarships suspended on account of unsatisfactory progress, while 4 have been reduced for the same reason.

(3) Synopsis of the Results of Examinations—May, 1909.

<i>Subject.</i>	<i>No. entered.</i>	<i>Passed.</i>	<i>Failed.</i>
Physics ...	24	20	4
Chemistry ...	4	3	1
Botany ...	3	0	3
Osteology ...	2	2	0
Anatomy ...	1	1	0
Physiology ...	1	1	0
Materia Medica ...	1	0	1
Pharmacy ...	12	3	9
Pathology ...	15	13	2
Hygiene ...	15	10	5
Forensic Medicine ...	16	15	1

December, 1909.

Physics ...	3	3	0
Chemistry ...	20	17	3
Osteology ...	17	10	7
Botany ...	22	18	4
Anatomy ...	11	9	2
Physiology ...	11	8	3
Materia Medica ...	12	10	2
Pharmacy ...	10	8	2
Pathology ...	11	8	3
Forensic Medicine ...	10	8	2
Hygiene ...	13	10	3

During the year, classes have been conducted in all the subjects of the curriculum, including Ophthalmology and Lunacy. The results of the examinations have been satisfactory, except in the case of Pharmacy; in these subjects the results were so very unsatisfactory that a new lectureship on the subject had to be instituted, with an honorarium of \$500 per annum. Mr. G. W. CRAWFORD, M.P.S., was appointed Lecturer. Over \$500 were spent in obtaining the necessary apparatus, etc., for the teaching of this subject. The results appear to have justified the expenditure.

4. The conduct of the students during the year has been good on the whole. One student was suspended for three months, for unbecoming conduct towards one of the lecturers, while others were fined small amounts for being absent without leave, neglect of duty, and such like offences.

5. *Staff, etc.*—Dr. FREER was appointed Senior Medical Officer, Selangor, on February 3rd, 1909. I was appointed to the principalship while on leave, and returned to duty on June 22nd, 1909. During the interval Dr. G. A. FINLAYSON acted as Principal in addition to his other duties. Dr. S. M. LIVESEY was promoted to the post of Physiologist and Assistant Pathologist on February 26th, 1909. Dr. D. J. GALLOWAY was on leave during the end of the short session and part of the long session. His place was taken by Dr. F. W. MOORE, who also gave part of a course on Ophthalmology at Tan Tock Seng's Hospital. Major E. M. PILCHER, R.A.M.C., F.R.C.S., D.S.O., conducted classes in Systematic, Clinical, and Operative Surgery. To him and to Dr. FINLAYSON, who superintend the work of the students in the wards at Tan Tock Seng's Hospital, the school is much indebted for their thoroughness and enthusiasm in teaching Clinical Surgery and Medicine respectively. These gentlemen in superintending the clinical work of the fourth and fifth years' students at a critical stage in their training, have set them work on right lines, and have taught them a thoroughness of method which will be of the greatest assistance and advantage to them in their future careers. To all the teachers the school is deeply indebted for their ungrudging devotion to their duties, and in many cases, for sparing to the school valuable time, which might otherwise have been given to private work.

A new tiffin room has been added. It is conducted by the students' club, and has proved very useful. A bicycle shelter has also been built. We should have been

without a recreation ground for the past year, had not permission been kindly granted to use the grounds of Outram Road School two afternoons a week. It is a matter for regret that such a ground cannot be obtained.

6. There is urgent need of a new building in connection with the school. The present Reading Room accommodation is quite inadequate; moreover, a new small class room and a museum are necessary. There are now over 300 specimens in the temporary museum, many of which have been added during this year, and most of which have been labelled, numbered and catalogued. The catalogue is at present typewritten only. It is available to any of the teachers or students who wish to use it.

A considerable number of new books and some new apparatus were purchased.

The number of applications for admission is about the same as last year.

Hospital Assistant Course.

Seven Hospital Assistants completed the course and passed the examinations. One of these was a private student, 2 were for Selangor, 2 for Negri Sembilan, and 2 for the Straits.

Seventeen joined in 1909, of whom Perak sent 8; the Straits 4, Pahang 3 and 2 were paying students.

Three of these who joined in 1908 have not yet completed the course, making a total on the books of 20.

During the year Botany, Osteology, and Chemistry were cut out of the course for Hospital Assistants, and practical instruction in dispensing, etc., was substituted, so that the course is now almost entirely a practical one.

APPENDIX K.

Pathological Department.

REPORT BY DR. G. A. FINLAYSON, *Government Pathologist.*

I. Laboratory.

During the year 1,258 specimens were examined as compared with 4,265 during 1908. The great decrease is due to this factor, that no systematic examination of the blood of patients admitted into Tan Tock Seng Hospital with a history of fever is now carried out at the Laboratory. Of the specimens forwarded for examination, 1,062 were sent in from the various Government hospitals, while 196 were submitted by private practitioners.

MALARIA.

The parasite was demonstrated in 59 blood films :—

Subtertian infection	...	...	...	27
Benign tertian infection	...	...	...	26
Benign Quartan infection	...	...	...	6

in 131 specimens no parasite was observed.

WIDAL REACTION.

In 202 instances the reaction was positive, but in several cases a duplicate sample of blood was sent, so this number represents a somewhat smaller number of cases of enteric fever.

There was no definite reaction in 571 cases.

Table showing monthly incidence.

January	... 12	May	... 21	September	... 10
February	... 18	June	... 22	October	... 38
March	... 18	July	... 21	November	... 10
April	... 12	August	... 15	December	... 5
	60		79		63

TUBERCULOSIS.

In 65 samples of sputa forwarded for examination tubercle bacilli were demonstrated; in 99 no T. B. were observed.

DIPHTHERIA.

The causal bacillus was seen in 5 instances. These cases occurred during the last 2-3 months of the year.

GONORRHOEA.

Thirty-two smears from urethral discharge were examined and in 13 the typical intracellular diplococci were noted.

VARIOUS.

Several smears were examined in suspected cases of Leprosy but mostly with a negative result. Other specimens included 21 samples of urine for a report on the deposit, the presence or absence of T. B. B. Coli Comm., etc., 16 of fæces for the presence or absence of ova, amoebæ, etc., while 18 blood films were forwarded for differential leucocytic count.

WATER—MUNICIPAL SUPPLY.

Some 12 samples, taken at various intervals and at different standpipes were examined during the year. The standard remains, as before, practically constant, the average number of organisms per c.c. being 82, varying from 48-120 while .05 c.c. occasionally, and .25 c.c. always, produced gas and acid in McConkey's medium.

RATS.

The examination of rats has been discontinued since July, 1908.

MORTUARIES.

1.—*Tan Tock Seng Hospital.*

Total number of autopsies performed, 1,278.

Return showing the diseases to which death was directly attributed:—

1. Beri-beri ...	76	12. Lobar pneumonia ...	59
2. Enteric Fever ...	23	13. Other diseases of respiratory system ...	61
3. Dysentery ...	296	14. Malignant growth ...	22
4. Other diseases of the Ali-mentary Canal ...	60	15. Accidents, etc. ...	33
5. Sapræmic conditions ...	51	16. Diseases of the nervous system ...	26
6. Plague ...	1	17. Diseases of the circulatory system ...	69
7. Syphilis ...	3	18. Diseases of the Genito-urinary system ...	67
8. Malaria ...	241	19. Unknown ...	2
9. Anchylostomiasis ...	20		
10. Filariasis ...	1		
11. Tuberculosis ...	167		

RETURN SHOWING THE INCIDENCE OF DISEASE.

General Diseases.

1. Beri-beri ...	94	6. Leprosy ...	1
2. Enteric Fever ...	39	7. Septicæmia ...	8
3. Malaria ...	321	8. Plague ...	1
4. Dysentery ...	489	9. Pyæmia ...	5
5. New growth ...	22	10. Diseases of blood ...	11

LOCAL DISEASES.

A.—Nervous System.

1. Cerebro-spinal Meningitis ...	1	6. Abscess of brain ...	2
2. Tubercular Meningitis ...	8	7. Gumma of brain ...	9
3. Pachymeningitis, chronic ...	3	8. Cerebral softening ...	10
4. Leptomeningitis, acute ...	12	9. Cerebral laceration ...	2
5. „ chronic ...	1	10. Myelitis, acute ...	1

B.—Circulatory System.

1. Pericarditis, <i>acute</i> suppurative	7	Aneurism, coeliac axis	...	1
" sero-fibrinous	20	" of heart	...	1
<i>tubercular</i>	4	6 Thrombosis, portal vein	...	7
<i>Adhesive, chronic</i>	7	" splenic vein	...	1
2. Endocarditis, <i>chronic</i> , aortic	15	" inferior vena		
mitral	10	cava	...	2
ventricular wall	9	" iliac veins	...	5
<i>Ulcerative—</i>		" femoral vein	...	1
Aortic	5	" renal vein	...	1
mitral	1	" sup. longitudinal		
pulmonary	2	sinus	...	1
ventricular wall	2	" iliac artery	...	1
3. Acute dilatation of heart,		7. Hæmorrhage, cerebral	...	8
fatty, etc.	4	" subdural	...	8
4. Gummata of heart	3	8. Lymphatic Leukæmia	...	3
5. Aneurism, aortic arch	9	9. Splenic Anæmia	...	6
" innominate	1	10. Pernicious Anæmia	...	2

C.—Respiratory System.

1. Asthma	...	...	1	Pleurisy tubercular, chronic	101	
2. Bronchitis, acute		..	8	12. Empyema	...	42
,, chronic		...	8	13. Pneumothorax	...	3
3. Broncho-pneumonia		...	36	14. Pyopneumothorax	...	3
4. Lobar pneumonia, acute		...	62	15. General Tuberculosis	...	22
,, chronic			41	16. Acute miliary tuberculosis		3
5. Bronchiectasis		...	10	17. Tuberculosis of lung, active		204
6. Infarct of lung		...	5	,, ,, quies-		
7. Gumma of lung		...	1	cent	...	33
8. Gangrene of lung		...	19	18. Tuberculosis of larynx	...	65
9. Pulmonary abscess		...	1	19. Tuberculosis of trachea	...	11
10. Pulmonary Collapse		...	22	20. Acute inflammation of frontal		
11. Pleurisy, acute and recent			75			

D.—Digestive System.

1. Tubercular ulceration of			19. Cholangitis	...	12
tongue	...	1	20. Perisplenitis, chronic	...	41
2. " tonsil	...	1	21. Splenic abscess	...	5
3. Œsophageal ulcer	...	1	" Gummata	...	17
4. Gastric ulcer	...	10	22. Tubercular ulceration of		
5. Duodenal ulcer	...	6	small gut	101	
6. Entero-colitis, acute	...	13	" " large gut	37	
chronic	...	3	" " appendix	1	
7. Stricture of œsophagus	...	1	23. " nodules in spleen	27	
8. " " rectum	...	4	" " liver	10	
9. Fistula in ano	...	2	24. Appendicitis, acute	...	5
10. Hernia, inguinal, strangulated	1		25. Amyloid Liver	...	2
" " incarcerated	2		" spleen	...	1
" " reducible	2		26. Dysentery { acute 88		
11. Peritonitis (a) <i>acute</i> , general	40		amœbic { subacute 20		
localised	6		chronic 200	308	
(b) plastic, general			bacillary { acute 66		
localised	7		subacute 17	156	
(c) tubercular	8		chronic 73		
12. Perihepatitis, chronic	...	38	mixed form { acute 9		
13. Hepatic Cirrhosis	...	45	subacute 1	22	
14. Hepatic abscess, amœbic	...	13	chronic 12		
" " septic	...	2	malarial	...	3
15. Obstructive Jaundice	...	2	27. Malarial pigment in spleen	184	
16. Biliary Calculi	...	39	28. Pigmentation of Peyer's		
17. Gummata in liver	...	15	patches following recent		
18. Cholecystitis	...	10	Enteric Fever	...	6

E.—Genito-Urinary System.

1. Parenchymatous Nephritis, acute ... 5	8. Cystitis, acute ... 8
Parenchymatous, subacute and chronic ... 36	9. Tubercular disease of bladder epididymis ... 1
2. Interstitial nephritis ... 75	10. Stricture of urethra ... 3
3. Hydronephrosis ... 1	11. Urethritis, acute ... 3
4. Congenital cystic disease ... 1	12. Urethral fistula ... 1
5. Suppurative pyelitis ... 1	13. Prostatic abscess ... 1
6. Pyelonephritis ... 13	14. Gumma of testicle ... 3
7. Renal abscess ... 1	15. Hydrocele, large ... 8
Renal Calculi ... 15	16. Hæmatocele ... 3
Renal infarct ... 8	17. Atrophy of kidney ... 8
Renal Gumma ... 1	18. Amyloid kidney ... 3
Renal tuberculosis ... 12	19. Pyosalpinx ... 1
	20. Uræmia ... 11

F.—Diseases of Bones and Joints.

1. Tubercular disease of hip joint ... 1	Necrosis of tarsus ... 3
2. Tubercular disease of knee joint ... 1	7. Synovitis of knee joint, acute chronic ... 3
3. Tubercular disease of elbow joint ... 1	8. Subluxation of sterno-clavi- cular joint ... 1
4. Tubercular disease of ankle joint ... 1	9. Gumma, sternum ... 1
5. Caries of spine ... 5	10. " clavicle ... 1
6. Necrosis of jaw ... 2	11. Perforated palate ... 1
" ulna ... 1	12. Nodes on tibia ... 3
	12. Otitis media, acute ... 1

G.—New Growth—Malignant.

1. Epithelioma of Tongue ... 1	Carcinoma of Stomach, car- diac end ... 1
2. Epithelioma of Jaw ... 1	6. Carcinoma of œsophagus ... 1
3. Carcinoma of Liver ... 5	7. " " arising from glands in neck ... 6
4. " " Suprarenal ... 1	8. Mediastinal Sarcoma ... 2
5. " " Stomach, pylo- rus ... 3	9. Sarcoma of femur ... 1

H.—Affections produced by External Causes.

1. Fracture.—	3. Drowning ... 2
" Skull ... 5	4. Hanging, Suicidal ... 4
" Spine ... 2	Accidental ... 1
" Lower jaw ... 1	5. Stab wounds ... 3
" Rib ... 2	6. Multiple injuries, stabs, etc. ... 12
" Ulna and Radius ... 1	7. Rupture of spleen ... 6
" Fibula ... 1	" " liver ... 2
" Tibia ... 4	" " bladder ... 1
" Femur ... 8	8. Burns ... 1
2. Cut throat ... 1	

K.—Varied conditions.

1. Anchylostomiasis ... 32	8. Tubercular disease of lym- phatic glands :—
2. Filariasis ... 1	active, cervical ... 2
3. Shock ... 1	bronchial ... 21
4. Abscess, pyæmic 5, from morphine injection 1, retro- pharyngeal 1, parotid 2, suprahepatic 2, ischio-rectal 1, iliopsoas 3, thigh 1, calf 1, gluteal 1 ... 18	mesenteric ... 42
5. Cellulitis, acute, leg 9, arm 2, scrotum 1 ... 12	quiescent, bronchial ... 2
6. Gangrene, leg 23, arm 2, buttock 3, perinæum 1 ... 29	mesenteric ... 1
7. Extensive ulceration, leg 21, arm 1, scrotum 2, penis 6, tongue 1, cheek 1 ... 32	9. Spinal curvature, Kyphosis ... 7
	Scoliosis ... 6
	Lordosis ... 2
	10. Patent foramen ovale ... 1
	11. Perforated interventricular septum ... 1
	12. Marked atheromatous changes in vessels ... 175
	13. Unknown ... 2

II. Morgue, Sepoy Lines.

Number of autopsies performed, 264.

Return showing cause of death.

1. Beri-beri 27	11. Other diseases of alimentary canal 24
2. Pneumonia 9	12. Malignant growth ... 3
3. Other diseases of respiratory system 13	13. Diseases of nervous system ... 2
4. Malaria 45	14. Diseases of circulatory system 14
5. Poisoning and accidents . 58	15. Diseases of excretory system 4
6. Tuberculosis 4	16. Tetanus 3
7. Cholera 19	17. Diphtheria 1
8. Plague 3	18. Syphilis 2
9. Dysentery 22	19. Sapræmic conditions ... 6
10. Enteric Fever 5	

RETURN SHOWING INCIDENCE OF DISEASE.

General Diseases.

1. Beri-beri 29	10. Malaria 48
2. Cholera 19	11. Pneumonia 14
3. Enteric Fever 11	12. Diphtheria 1
4. Dysentery 25	13. Tetanus 3
5. Sprue 1	14. Siriasis 1
6. Plague 3	15. Septicæmia 3
7. Myelogenous Leukæmia ... 1	16. Pyæmia 1
8. Splenic anæmia 2	17. Sapræmia 2
9. New Growth 3	18. Syphilis 8

LOCAL DISEASES.

A.—Nervous System.

1. Anterior poliomyelitis, acute 1	2. Leptomeningitis, subacute 1
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B.—Circulatory System.

1. Hæmorrhage, cerebral ... 1	Endocarditis, pulmonary ulcerative 2
„ subdural, etc. 3	4. Cerebral Thrombosis ... 1
„ mid-meningeal 2	5. Thrombosis of abdominal aorta ... 1
2. Aneurism, aortic, arch ... 3	6. Pericarditis, adhesive ... 2
3. Endocarditis, aortic, acute 1,	„ tubercular ... 1
„ chronic 5 ... 6	7. Acute dilatation of heart, fatty 1
„ mitral chronic 3	

C.—Respiratory System.

1. Bronchitis, acute ... 1	Pleuritis, recent with adhesions 35
„ chronic ... 1	Pleuritis, old with adhesions 32
2. Broncho-pneumonia ... 13	„ tubercular ... 22
3. Bronchiectasis ... 4	6. Lobar pneumonia ... 14
4. Tuberculosis of lung, active 12	7. Empyema ... 3
„ quiescent 10	8. Pyopneumothorax ... 3
Tuberculosis of larynx ... 4	9. Pulmonary abscess ... 1
5. Pleuritis, acute with effusion 1	„ gangrene ... 2

D.—Digestive System.

1. Retropharyngeal abscess ...	1	Dysentery, amœbic, chronic	4
2. Gastric ulcer ...	2	" bacillary, acute	12
3. Gastropsois ...	1	15. Peritonitis, acute ...	9
4. Entero-colitis, acute ...	5	" plastic ...	3
5. Intestinal obstruction ...	2	16. Tubercular ulceration, small	
6. Strangulated Hernia ...	3	gut ...	7
7. Perihepatitis, chronic ...	9	Tubercular ulceration, large	
8. Hepatic Cirrhosis ...	8	gut ...	3
9. Gumma of liver ...	3	Tubercular ulceration, cæcum	1
10. Biliary Calculi ...	6	17. Sprue ...	1
11. Perisplenitis, chronic ...	4	18. Carcinoma of stomach ...	2
12. Splenic gumma ...	2	" " liver ...	1
13. Malarial pigment in spleen	51	19. Splenic infarct ...	4
14. Dysentery, amœbic, acute	9		

E.—Genito-Urinary System.

1. Cystitis, acute ...	2	5. Septic nephritis ...	2
2. Parenchymatous nephritis,		6. Tuberculosis of kidney ...	2
acute ...	2	7. Ovarian Cyst ...	1
3. Interstitial nephritis, chronic	6	8. Salpingo-öophoritis, chronic	1
4. Amyloid Kidney ...	1	9. Uræmia ...	2

H.—Affections produced by external causes.

1. Fracture of skull ...	13	6. Rupture of spleen ...	6
" spine ...	3	" " heart ...	3
" pelvis ...	5	7. Laceration of brain ...	1
" femur ...	1	8. Drowning ...	1
" colles' ...	2	9. Rupture of colon ...	1
" ribs ...	5	" " urethra ...	2
" Tibia and fibula	2	10. Poisoning, opium ...	6
" clavicle ...	1	" morphine ...	1
2. Cut throat ...	1	" Mercury ...	1
3. Stab wounds ...	8	" Iodine ...	1
4. Gun-shot wound ...	1	11. Asphyxia ...	2
5. Crushed ribs, etc. ...	2	12. Scalp wound, extensive ...	1

K.—Varied conditions.

1. Premature birth ...	1	5. Sloughing scrotum ...	1
2. Recent delivery ...	1	6. Tubercular mesenteric glands,	
3. Cellulitis, acute, leg ...	3	quiescent ...	1
" " neck ...	1	7. Transposition of viscera ...	1
4. Malignant œdema ...	1		

III. Mortuary—Quarantine Camp.

Number of autopsies performed 70.

Return showing cause of death.

1. Beri-beri ...	1	8. Plague ...	1
2. Cancer of pylorus ...	1	9. Chronic parenchymatous	
3. Dysentery ...	8	nephritis ...	2
4. Enteric Fever ...	2	10. Morbus cordis, mitral ...	1
5. Other diseases of alimentary		11. Aortic aneurism ...	1
Canal ...	7	12. Cholera ...	39
6. Malaria ...	3	13. General debility and old age	1
7. Septic infections ...	3		

RETURN SHOWING INCIDENCE OF DISEASE.

1. Cholera ...	39	6. Dysentery ...	9
2. Plague ...	1	7. Enteric Fever ...	3
3. Beri-beri ..	1	8. Erysipelas ...	1
4. New growth ...	1	9. Septicæmia ...	1
5. Malaria ...	3	10. Pyæmia ...	1

LOCAL DISEASES.

B.—Circulatory System.

1. Endocarditis, mitral, chronic	2	2. Aneurism, aortic arch ...	1
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C.—Respiratory System.

1. Lobar pneumonia	...	1	Pleural adhesions, old	...	4
2. Pleuritis, acute	...	1	" tubercular		4
3. Empyema	...	1	5. Tuberculosis of lung, active		2
4. Pleural adhesions, recent	...	2	" quiescent		2

D.—Digestive System.

1. Suppurative parotitis	...	1	8. Malarial pigment in spleen	13
2. Duodenal ulcer	...	1	9. Perisplenitis, chronic	...
3. Suppurative peritonitis	...	1	10. Gummata of spleen	...
4. Entero-colitis, acute	...	3	11. Tubercular ulceration of	
5. Perihepatitis, chronic	...	1	small gut	...
6. Hepatic cirrhosis	...	4	12. Intestinal obstruction	...
7. Biliary calculi	...	4	13. Cancer of stomach	...

E.—Genito-Urinary System.

1. Parenchymatous chronic 2	2. Interstitial chronic 1
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General Diseases.

1. *Beri-beri*.—There is no doubt that the case incidence and mortality of this disease has greatly diminished within the past few years. In 1905 and 1906 at Tan Tock Seng Hospital 190 patients died showing signs of Beri-beri, while during the past year there were only some 94 cases.

Should the hypothesis of Dr. H. SCHAUMANN and Drs. H. FRASER and STANTON be proved to be correct, undoubtedly a distinct advance will be made towards the eradication of this scourge.

2. *Enteric Fever*.—The mortality from this infectious disease shows a marked decrease as compared with 1908:—

The noticeable feature is the large percentage—50 per cent which died from an acute Suppurative Peritonitis, following the perforation of an ulcer. In fourteen instances the inflammation was general, while in one it was more or less limited to the site of the opening in the gut. As remarked in previous reports quite a number of cases are admitted during the third and fourth week of the disease in almost a dying condition. Naturally such individuals have been disseminating typhoid bacilli in their evacuations for some weeks before their admission into hospital—a factor which medical officers engaged in preventive medicine have to consider and to contend against, in addition to the spread of the disease by convalescent typhoid carriers.

3. *Malaria*.—I can merely emphasize by reiteration the high death-rate from this preventable disease: 372 cases showed the malarial parasite present in the peripheral blood, and of these 289 died of the infection. Further, in 248 cases malarial pigment was demonstrated in the spleen, so that 620 cases or 33 per cent of all autopsies performed showed that the individual was suffering or had previously suffered from malaria. Similarly, as noted in my last report, quite a considerable percentage died within 24-48 hours after admission.

4. *Plague*.—Only a few sporadic cases of the bubonic type occurred.

5. *Cholera*.—The majority of the cases occurred in the first quarter of the year, being simply a continuation of the epidemic which broke out at the latter end of 1908.

6. *Malignant disease*.—A short report on such cases, as have occurred during the past few years, will be forwarded at an early date.

7. *Dysentery*.—A dysenteric condition of the gut is to be noted in a large percentage of the cases examined. From the figures annexed it will be observed that the lesions in the majority are caused by the pathogenic entamœba. In 14 cases or 4·5 per cent was there associated an abscess of the liver. An acute inflammation of the peritoneal sac—suppurative or serofibrinous—was observed in 25 instances. This was due either to the perforation of an ulcer or to the gradual invasion and destruction of the wall of the bowel, when the inflammatory condition spread into the cavity by simple extension.

In 9 cases the inflammation was quite general, but in the others it was more or less localised, with an attempt at the formation of plastic adhesions. Another noticeable condition in cases of a chronic type where there was a marked cicatricial sclerosis of the wall of the gut with narrowing of the lumen, and a dense thickening and drawing up of the mesentery—most marked in the pelvic colon—was the presence of a considerable quantity of a serous effusion into the peritoneal sac, while there was also a certain amount of œdema of the lower extremities. In my previous report I drew attention to the occurrence of patchy areas of pulmonary necrosis and sloughing which are occasionally found in cases of chronic dysentery.

Some work is being done on this condition but the organisms isolated are so varying in character that it would be premature to offer any definite opinion as to the causal agent.

8. *Pneumonia.*

Acute—Lobar incidence.

Right upper	...	13	Left upper	...	3
„ „ and middle	...	3	„ lower	...	26
„ middle	...	6	Both lobes	...	5
„ lower and middle	...	4			
„ lower	...	11			
„ upper and lower	...	4			
All lobes	...	9			

Chronic.

Right upper	...	4	Left upper	...	1
„ „ and middle	...	2	„ lower	...	18
„ „ and lower	...	1	Both lobes	...	2
„ middle	...	2			
„ „ and lower	...	4			
„ lower	...	13			

I ventured to suggest previously that the case incidence of this disease is higher in Tamils than in Chinese. Taking the admission-returns of these nationalities into Tan Tock Seng Hospital in comparison I think this must be so—71 cases being noted in Chinese, while 33 occurred in Tamils. A few cases also occurred amongst Malays, Javanese, Bengalis, etc.

As usual a number of cases were accompanied by an acute pericarditis, an empyema or a suppurative peritonitis.

A.

Local diseases.—The marked feature is the considerable number which showed gummatous deposits in the central nervous system—in 2 instances multiple nodules were observed at the base, situated in the cerebral peduncles and pons.

B.

One case which exhibited during life several of the signs and symptoms of Stokes-Adams' disease showed p.m. advanced syphilitic changes at the base of the interventricular septum. In another instance a perforation had occurred at the pars membranacea.

Under this section several cases have been returned as splenic anæmia. At the autopsy the only viscus which shows marked morbid changes is the spleen, which is always considerably enlarged, weighing at times 40 ozs. The blood is watery but nothing abnormal can be detected save a considerable relative increase in the mononuclear corpuscles, particularly those of the larger lymphocytes. No parasite, on repeated examination, has been observed either in the peripheral blood or in the liver or spleen. The ætiology of such cases, which occur, for the most part, amongst Chinese, remains quite obscure.

C.

No special remark is called for, as the incidence of Tuberculosis has been made the subject of former comments.

D.

In two cases of Hepatic Cirrhosis, the ova of the *Schistosomum Japonicum* were present in large numbers.

Biliary Calculi were observed in 49 cases, and I may again draw attention to the point that undoubtedly Malaria is predisposing to the formation of such deposits. In several instances an acute inflammation of the ducts or gall-bladder had supervened leading to suppurative changes in the walls and in the hepatic substance.

Numerous causes led to an inflammation of the peritoneal sac.

Ulceration of the gut, typhoid	...	...	...	15
" " dysentery	...	...	...	25
" " syphilis	...	...	...	1
" " tuberculosis	...	...	...	2
Strangulated Hernia	...	...	...	2
Ulcer of the stomach	...	...	...	3
Ulcer of the duodenum	...	...	...	1
Hepatic cirrhosis	...	...	...	4
Acute appendicitis	...	...	...	1
Rupture of bladder	...	...	...	1
Rupture of liver	...	...	...	1
Abscess, splenic	...	...	...	1
Abscess, iliopsoas	...	...	...	1
Pneumococcic associated with empyema	...	...	...	3
Stab wound	...	...	...	1
Biliary Calculus	...	...	...	1

It is most unusual to find a perforated tubercular ulcer but this had occurred in two instances, giving rise to a general suppurative inflammation.

E. F. G.

No special remark is called for.

H.

There is quite an usually large number of cases of fracture of the skull, accidental or homicidal. In certain other cases the fracture produced was rare and may be made the subject of a short paper in the journal, as a description in such a report is unnecessary.

K.

Requires no further amplification.

Intestinal Parasites.

Ascaris Lumbricoides	...	...	...	200
Trichocephalus dispar	...	...	...	44
Anchylostomum duodenale	...	...	...	128

In 20 cases death resulted from Anchylostomiasis.

Distomiasis.

The Clonorchis Sinensis was noted in the bile ducts in 60 instances.

Staff.

There has been no change save that on Dr. KEITH's promotion to Principal, Straits Settlements and Federated Malay States Government Medical School, Dr. S. M. LIVESEY was appointed Assistant Pathologist, Medical School. Dr. KEITH has continued to mount specimens for the museum and to prepare a descriptive catalogue, the collection being now fuller and more valuable.

Buildings.

The Bacteriological Laboratory and Morgue, Sepoy Lines, and the Mortuary, Tan Tock Seng's Hospital, were finished and entered into in the early part of the year so that the work is now carried out more efficiently.

APPENDIX L.

Annual Report on the Medical Department, Labuan, for the Year 1909.

REPORT BY DR. T. C. CLEVERTON, *Medical Officer.*

Population and Health.—The following table shows the estimated population, and the birth and death-rates, for the years 1906 to 1909 :—

<i>Year.</i>	<i>Estimated Population.</i>	<i>Births.</i>	<i>Deaths.</i>	<i>Birth-rate per mille.</i>	<i>Death-rate per mille.</i>
—	—	—	—	—	—
1906	8,317	116	161	13·94	19·35
1907	8,286	149	180	17·99	21·72
1908	8,245	172	213	20·82	25·83
1909	8,231	183	197	22·23	23·93

The estimated population, obtained from the figures recorded in the office of the Registrar, Births and Deaths, has steadily decreased since 1906. The population is estimated from the number of births and deaths reported only, no figures being available as to the number of immigrants and emigrants. It is my belief, moreover, that many births and deaths are not reported to the Registrar, especially those occurring amongst the Kadayans in out-lying districts. For these reasons the estimated population is to be regarded as a very approximate one. Penghulus were appointed in the Western District this year, and it is part of their duties to see that reports of births and deaths are sent to the Registrar. The birth-rate has steadily increased, on the figures recorded, since 1906.

The death-rate has also steadily increased since 1906, with the exception that last year's (1908) death-rate was the highest recorded for the four years.

The following table shows the infant mortality under one year of age, with the percentage of this mortality to the death and birth-rates for the years 1906 to 1909 :—

<i>Year.</i>	<i>Total number of deaths under one year of age.</i>	<i>Percentage of Death-rate.</i>	<i>Percentage of Birth-rate.</i>
—	—	—	—
1906	66	40·99	56·89
1907	51	28·33	34·22
1908	67	31·45	38·95
1909	74	37·56	40·43

This table shows a very unsatisfactory return. The high mortality is largely due to faulty feeding and bad hygiene, and the Malays appear to be intolerant of any change for the better in this respect: moreover many of them consider that the children under one year of age are too young to take medicines.

The chief causes of death given are (a) Fever 64, (b) Pulmonary Tuberculosis 25, (c) Diarrhœa and Vomiting 14, (d) Marasmus 10, and (e) Beri-beri 6.

Public Health.—No epidemic of infectious or contagious diseases has occurred on the island.

Port Health Work.—Twenty-one ships were examined before being granted "pratique." No ship or case was quarantined. The Quarantine Station, Pulo Papan, remains as it was last year with no buildings upon it except the lighthouse.

Malaria.—This shows a marked increase when compared with the previous year. The total number of admissions for Malaria and its immediate effects in 1908 was 32, in 1909 it was 112. The type of Malaria which predominates is intermittent, and of this type most of the slides examined showed Tertian parasites (benign), often too in patients who clinically exhibited quotidian fever. This I took to be due to a double infection.

In connection with this the following comparison between the amount of rainfall in inches and the number of admissions for malaria may be interesting.

Dividing the whole year into thirds it is found that during the first four months the rainfall was 24 inches and the admissions for Malaria were 22: during the second four months the rainfall was 49·13 inches and the admissions for Malaria were 65: during the last four months the rainfall was 40·87 inches and the admissions for Malaria were 25. The number of admissions during the last four months was doubtless influenced favourably by the large amount of quinine that was distributed during that time.

Anopheles larvæ have been found in pools near the Police barracks.

Of the total number of admissions for Malaria only two or three were Malays, and it is impossible to gauge the extent of this disease amongst them, as they neither seek treatment nor care for inquiries at their villages.

Beri-beri.—Twenty cases were treated in 1909 as against 17 in 1908.

Venereal diseases.—Thirteen were treated in hospital in 1909 as against 3 in 1908. In addition a few cases were treated as out-patients.

Pulmonary Tuberculosis.—Ten cases were treated in hospital in 1909 as against 5 in 1908.

Dysentery.—Seven cases were treated in hospital in 1909 as against 2 in 1908.

General Sanitary Condition.—The drainage of the town of Victoria has been improved, but it is still far from satisfactory. The night-soil is removed daily in metal buckets and carried across the harbour outside the suburban limits, by the Sanitary Board's Contractor, who sells it to the Chinese gardeners for manure. The town refuse is collected daily and deposited in a place approved by the Sanitary Board, in grounds at the junction of Plain and North Roads, where there are pits to be filled in.

Vaccination.—The total number of vaccinations was 347, as against 290 in 1908. In both years there were more vaccinations than there were births registered. Of those vaccinated 104 were infants of 3 months and under, 49 were children between the ages of 3 months and 1 year, and 194 were persons 1 year of age and over. Of the total number performed, 86 were done by a private medical practitioner.

Of the total number 300 were successful, 44 were unsuccessful and 3 failed to report.

Early in the year two consignments of lymph failed to take effect: otherwise the lymph supplied was satisfactory.

Meteorological.—During the first three months of the year the N. E. Monsoons prevailed, and the rainfall during these three months was less than that during any other three months of the year. Total rainfall 1909 was 114·00 inches. Total rainfall 1908 was 165·07 inches.

The wettest month was June when 16·56 inches fell.

The greatest rainfall for 24 hours was 3·18 inches. The highest temperature recorded was 91° F. The lowest temperature recorded was 70° F.

The Hospital.—The total number of patients treated during 1909 was 307, as against 167 in 1908, 183 in 1907, and 164 in 1906. The excess in the number of cases treated this year is largely attributable to the greater number of admissions for Malaria; 6 remained in hospital at the end of the year.

The daily average number of sick was 11·6. The chief diseases treated were:—Malaria and its immediate effects 112, Beri-beri 20, Venereal Diseases 13, Pulmonary Tuberculosis 10, Dysentery 7, and accidents 8.

The number of operations done under chloroform was 20.

The number of deaths in hospital was 17, the percentage of deaths to cases treated in hospital in 1909 was 5·53, in 1908 the percentage was 13·17, in 1907 it was 13·11 and in 1906 it was 10·36. The great improvement in the mortality percentage in 1909 is more apparent than real, as a great number of the cases of admissions were amongst the Police who for various reasons—the chief being that they recover more quickly in hospital—are admitted to hospital for more trivial complaints than other classes of the community. Taking this into consideration, however, there was a distinct improvement in the mortality percentage during 1909, due to the fact that fewer patients were admitted moribund. Also fewer serious accidents occurred at the Coal Mines during 1909. The chief causes of death were:—Pulmonary Tuberculosis 6, Malaria 3, and Dementia—apparently following Malaria, 2.

Only one death occurred amongst the 20 cases of Beri-beri, but many of the cases were very protracted.

The Staff.—I was in charge as Medical Officer during the year.

Dispenser LEONG AH NG resigned at the end of March. From the 1st to the 7th April, Dresser GOMEZ acted as Dispenser in addition to his duties as Dresser. From the 8th April Hospital Assistant D. S. STONER took up his duties in this capacity. His work has been satisfactory.

Attendants.—These are difficult to obtain here: both those at present working were former hospital patients.

The Police.—The general health of the Police during the year 1909 has been unsatisfactory. Almost all the members of this force have suffered from Malaria Fever, with consequent anæmia, dyspepsia and debility. Quinine has been freely distributed to the individual members, and when it was suspected that some of them were either giving away, or selling the quinine, the members were persuaded to take it twice a week under the direct supervision of the Medical Department. The Government provided mosquito curtains to the individual members in September. The cases of Malaria were considerably reduced in September, October and November, but in December the number of cases began to rise again chiefly amongst the Sikhs and Indians. The stagnant pools in the vicinity of the Police barracks and Gaol were treated periodically with petroleum after September. Since September it has been my practice to treat with quinine every patient amongst the Police suffering from Malaria for one month after the last attack of fever. I find 12 grains, given twice a week, sufficient to prevent a relapse in most cases.

Buildings.

The Dispensary.—Part has been converted into an operating room. Minor repairs have been done to the Dispensary and the exterior limewashed.

A new ward for women with accommodations for 8 beds was completed in December.

Old Hospital.—This has now been converted into quarters for the Hospital Assistant and Dresser.

Dispenser's quarters.—This building has been converted into quarters for attendants.

Dresser's quarters, hospital kitchen, bathroom, etc.—These buildings which form one block have been re-roofed with corrugated iron renovated and extended.

The grounds.—A quantity of scrub has been cut down and the grounds have been fenced round with barbed wire.

SINGAPORE.

Return of the Statistics of Population for the Year 1909.

	Europeans.	Eurasians.	Malays.	Chinese.	Tamils.	Other Nationalities.	TOTAL.
Number of inhabitants in 1909	4,364	4,611	36,154	209,356	19,446	3,727	277,658
„ Births during the year 1909	121	153	1,576	3,880	374	92	6,196
„ Deaths „ 1909	48	125	1,532	8,126	836	112	10,779
„ Immigrants „ 1909	}		Not available.				
„ Emigrants „ 1909							
Number of inhabitants in 1908	4,295	4,548	36,145	203,251	19,242	3,579	271,060
Increase	69	63	9	6,105	204	148	6,598
or Decrease	...	...	...	...	...	...	...

Meteorological Return for the Year 1909.

	TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
January ...	°F 150·1	°F 66·1	°F 86·9	°F 72·6	°F 14·3	°F 81·2	Inches. 14·66	% 76·6	N.E.	Not recorded.	
February ...	147·8	69·9	86·2	72·5	13·7	80·4	9·41	77·2	N.E.		
March ...	157·9	70·4	88·3	72·3	16·0	82·3	18·37	78·6	N.E.		
April ...	148·9	71·2	87·4	75·2	12·2	82·7	11·50	78·2	E.		
May ...	153·2	72·5	89·5	75·7	13·8	84·6	4·68	78·9	S.W.		
June ...	147·3	71·6	87·7	74·9	12·8	82·7	10·54	77·9	S.E.		
July ...	151·3	71·2	88·6	75·3	13·3	84·2	1·03	78·2	S.W.		
August ...	151·4	71·1	87·0	74·1	12·9	82·2	7·27	77·3	S.W.		
September ...	151·0	71·5	88·2	74·3	13·9	83·1	5·90	77·7	S.W.		
October ...	151·8	71·9	88·0	75·1	12·9	83·2	5·29	78·4	S.W.		
November ...	148·3	70·6	87·3	73·3	14·0	81·9	9·65	77·5	N.W.		
December ...	146·8	69·8	85·8	73·3	12·5	80·2	10·99	76·5	N.E.		
Mean ...	150·5	70·6	87·5	74·5	13·0	82·4	Total. 109·79	77·8	...	...	

SINGAPORE.

*Return of Diseases and Deaths in 1909 at the following Institutions:—
General Hospital, Prison, St. John's Island, Tan Tock Seng's Hospital, Quarantine
Camp, Leper, Beri-beri and Lock Hospitals and Lunatic Asylum.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri	206	1,047	129	1,253	156	
Cerebro spinal fever	...	1	1	1	...	
Chicken-pox	...	60	...	60	2	
Cholera	1	25	19	26	...	
Cow-pox	1	...	...	1	...	
Dengue	...	13	...	13	1	
Diphtheria	...	3	1	3	...	
Dysentery	21	952	392	973	33	
Endocarditis, infective	...	1	1	1	...	
Enteric Fever	11	194	74	205	4	
Erysipelas	1	12	1	13	1	
Gonorrhœa	13	248	...	261	28	
Influenza	...	...	...	...	...	
Leprosy	32	57	12	79	45	
Malaria	...	189	7	189	8	
Tertian	11	1,738	232	1,749	31	
Quartan	...	8	1	8	...	
Æstivo-autumnal	54	2	...	56	...	
Chronic	1	64	9	65	4	
Not differentiated	17	1,088	64	1,205	19	
Measles	1	20	...	21	...	
Mumps	2	12	...	14	...	
Osteo Myelitis	...	1	...	1	...	
Phagedœna	6	21	12	27	2	
Plague	...	3	3	3	...	
Pneumonia	5	223	104	228	3	
Pyæmia	...	9	4	9	1	
Pyrexia	3	372	3	375	6	
Rheumatic Fever	6	51	...	57	2	
Septicæmia	1	12	9	13	...	
Small-pox	1	55	8	56	...	
Syphilis, Primary	8	300	...	308	18	
Secondary	52	770	20	822	84	
Tetanus	...	2	2	2	...	
Tuberculosis	14	229	99	243	13	
Yaws	...	1	...	1	...	
Other Diseases	...	71	34	71	2	
INTOXICATIONS.						
Alcohol	...	25	...	25	...	
Mercury	1	1	...	2	...	
Morphinism	...	1	...	1	1	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRE- CEDING GROUPS.						
Anæmia	9	139	19	148	2	
" pernicious	...	...	...	...	...	
Diabetes	...	3	1	3	2	
Exophthalmic Goitre	...	1	...	1	...	
Gout	...	1	...	1	1	
Leucocythæmia	...	1	1	1	...	
Lymphadenoma	...	...	...	...	...	
Osteo Arthritis	...	1	...	1	...	
Scurvy	...	...	...	...	...	
CERTAIN MORBID CONDITIONS INCIDENT TO VARIOUS PARTS.						
Malformations	...	4	1	4	1	
New Growth	...	...	...	...	...	
Non-malignant	3	28	1	31	2	
Malignant	1	50	27	51	...	
Cyst	...	7	...	7	1	
Carried forward...	482	8,116	1,291	8,598	473	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	482	8,116	1,291	8,598	473	
DISEASES OF THE NERVOUS SYSTEM.						
DISEASES OF THE NERVES.						
Neuritis ...	2	10	...	12	1	
DISEASES OF THE SPINAL CORD AND MEMBRANES.						
Meningitis ...	...	...	...	...	...	
Myelitis ...	...	8	...	8	4	
Primary Lateral Sclerosis ...	5	13	2	18	4	
Locomotor Ataxia ...	...	13	...	13	5	
Insular Sclerosis ...	...	1	...	1	1	
DISEASES OF THE BRAIN AND MEMBRANES.						
Meningitis ...	...	15	13	15	...	
Hæmorrhage ...	...	14	13	14	...	
Abscess ...	...	1	1	1	...	
Hydrocephalus ...	1	...	...	1	1	
Other Diseases ...	...	9	3	9	...	
NERVOUS DISORDERS.						
Paraplegia ...	3	4	1	7	1	
Hemiplegia ...	8	61	7	69	10	
Monoplegia ...	1	...	...	1	...	
Chorea ...	1	1	...	2	1	
Epilepsy ...	8	16	3	24	7	
Headache ...	1	4	...	5	...	
Neuralgia ...	...	8	...	8	1	
Hysteria ...	...	...	...	...	...	
Neurasthenia ...	1	6	...	7	...	
Other Diseases ...	...	3	...	3	...	
MENTAL DISEASES.						
Idiocy ...	11	...	...	11	...	
Mania, Acute ...	40	138	44	178	38	
Recurrent ...	6	4	2	10	6	
Chronic ...	30	70	2	100	9	
Alcoholic ...	...	...	...	...	...	
Senile ...	4	5	1	9	...	
Melancholia, Acute ...	5	19	8	24	9	
Chronic ...	10	5	...	15	8	
Delusional Insanity ...	5	13	1	18	13	
General Paralysis of Insane...	...	3	...	3	3	
Dementia, Secondary ...	211	30	14	241	240	
Organic ...	...	4	2	4	...	
Primary ...	9	3	...	12	4	
Other Diseases ...	...	13	3	13	17	
DISEASES OF THE EYE.						
Ophthalmia ...	8	217	...	225	11	
Purulent ...	4	11	...	15	1	
Granular ...	...	27	...	27	5	
Cornea Inflammation ...	2	5	...	7	1	
Ulcer ...	8	80	...	88	17	
Opacity ...	7	12	...	19	3	
Acquired deformities	7	11	...	18	4	
Iritis ...	...	34	...	34	4	
Glaucoma ...	1	1	...	2	...	
Optic Neuritis ...	...	1	...	1	...	
Cataract ...	6	10	...	16	3	
Panophthalmitis ...	9	19	...	28	...	
Refraction errors ...	1	...	...	1	...	
Blepharitis ...	...	2	...	2	...	
Entropion ...	...	1	...	1	...	
Other Eye Diseases ...	...	14	...	14	10	
<i>Carried forward...</i>	897	9,055	1,411	9,952	915	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	897	9,055	1,411	9,952	915	
DISEASES OF THE EAR.						
Hæmatoma Auricle ...	...	...	...	...	...	
External Ear, Inflammation. ...	...	2	...	2	...	
Middle Ear " ...	...	11	...	11	...	
Otitis Media ...	...	...	...	...	...	
Other Diseases ...	...	1	...	1	...	
DISEASES OF THE NOSE.						
Coryza ...	...	1	...	1	...	
Naso-pharyngeal Catarrh ...	...	...	...	...	...	
DISEASES OF THE CIRCULATORY SYSTEM						
Pericarditis ...	2	9	10	11	...	
Endocarditis ...	...	3	1	3	...	
Valvular Disease ...	4	58	18	62	4	
Myocarditis ...	...	...	...	...	...	
Dilatation of Heart ...	...	4	1	4	...	
Syncope ...	...	4	4	4	...	
Disordered Action of Heart ...	...	...	...	...	...	
Aneurysm ...	...	14	11	25	1	
Phlebitis ...	...	...	...	...	...	
Thrombosis ...	...	1	1	1	...	
Varix ...	...	3	...	3	...	
Other Diseases ...	...	5	4	5	...	
DISEASES OF THE RESPIRATORY SYSTEM						
Asthma ...	1	34	...	35	1	
Laryngitis ...	...	4	...	4	...	
Bronchitis ...	8	268	13	276	10	
Hæmoptysis ...	...	...	...	...	...	
Broncho-pneumonia ...	...	11	5	11	...	
Phthisis ...	20	289	172	309	15	
Pleurisy ...	...	24	4	24	1	
Empyema ...	3	19	17	22	...	
Hæmothorax ...	...	...	...	...	...	
Gangrene of Lung ...	...	14	11	14	...	
Other Diseases ...	1	3	1	4	...	
DISEASES OF THE DIGESTIVE SYSTEM.						
Stomatitis ...	...	10	...	10	...	
Ulceration of Mouth ...	...	...	...	...	...	
Gangrene of Mouth ...	...	5	4	5	...	
Caries of Tooth ...	...	5	...	5	...	
Ulceration of Tongue ...	...	...	...	...	...	
Sorethroat ...	1	2	...	3	...	
Tonsillitis ...	...	14	...	14	1	
Pharyngitis ...	...	2	...	2	...	
Gastritis ...	...	29	3	29	...	
Ulceration, Stomach ...	1	7	8	8	...	
Dyspepsia ...	3	120	...	129	7	
Other Diseases of Stomach..	...	25	1	25	3	
Enteritis ...	8	121	21	129	3	
Appendicitis ...	2	17	1	19	3	
Colitis ...	2	8	1	10	...	
Ulcer Duodenum ...	...	...	...	...	...	
Intestines ...	...	...	...	...	...	
Hernia ...	4	...	...	4	...	
Strangulated ...	...	41	4	41	1	
Obstruction, Intestines ...	...	6	4	6	...	
Diarrhoea ...	16	299	15	315	16	
Constipation ...	...	138	...	138	...	
<i>Carried forward ...</i>	973	10,686	1,746	11,659	981	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases. Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	973	10,686	1,746	11,659	981	
DISEASES OF THE DIGESTIVE SYSTEM.— <i>Continued.</i>						
Colic ...	...	4	...	4	...	
Ischio Rectal Abscess ...	1	7	...	8	2	
Fissure of Anus ...	1	6	...	7	...	
Fistula in Ano ...	2	34	...	36	2	
Piles ...	...	25	...	25	1	
Prolapse of Rectum ...	...	3	...	3	...	
Other Rectal Diseases ...	...	5	1	5	1	
Liver, Inflammation ...	...	6	...	6	...	
Abscess ...	...	10	6	10	1	
Chronic Inflammation ...	...	58	21	58	7	
Perihepatitis ...	1	4	4	5	...	
Congestion ...	...	6	...	6	1	
Jaundice ...	...	4	1	4	...	
Gall Stones ...	1	...	...	1	...	
Peritoneum, Inflammation ...	4	18	12	22	...	
Ascites ...	...	5	2	5	1	
Other Diseases ...	...	15	7	15	1	
DISEASES OF THE LYMPHATIC SYSTEM.						
Spleen, Inflammation ...	...	8	...	8	...	
Abscess ...	...	...	...	...	...	
Rupture ...	...	...	...	...	...	
Glands, Inflammation ...	4	142	...	146	9	
Suppuration ...	5	10	...	15	1	
Mechanical Affections ...	1	...	...	1	...	
Other Diseases ...	...	17	1	17	...	
DISEASES OF THE URINARY SYSTEM.						
Nephritis, Acute ...	...	16	11	16	1	
Chronic ...	9	130	39	139	11	
Pyelitis ...	...	1	1	1	...	
Renal Colic ...	...	1	...	1	...	
Cystitis ...	1	6	1	7	...	
Calculus ...	...	1	...	1	...	
Urine, Retention of ...	...	4	...	4	...	
Incontinence of ...	...	...	...	...	...	
Other Diseases ...	...	21	17	21	...	
DISEASES OF THE GENERATIVE SYSTEM, (MALE ORGANS.)						
Stricture ...	...	12	...	12	...	
Urethral Fistula ...	...	2	...	2	...	
Extravasation of Urine ...	...	9	2	9	...	
Impacted Calculus ...	...	3	1	3	1	
Prostate Hypertrophy ...	...	4	...	4	...	
Phimosis ...	...	21	...	21	2	
Paraphimosis ...	...	6	...	6	...	
Ulcer of Penis ...	...	...	...	...	...	
Soft Chancre ...	6	77	...	83	6	
Scrotum, Abscess ...	2	4	...	6	...	
Sloughing ...	1	10	...	11	...	
Hæmatocele ...	2	3	1	5	...	
Varicocele ...	...	...	...	...	...	
Epididymitis ...	...	3	...	3	...	
Hydrocele ...	1	32	...	33	4	
Orchitis ...	...	16	...	16	...	
Abscess Testis ...	...	2	...	2	...	
Hernia ...	...	5	...	5	...	
Perineal Abscess ...	...	...	...	...	...	
Other Diseases ...	...	13	...	13	...	
<i>Carried forward...</i>	1,015	11,475	1,874	12,490	1,033	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	1,015	11,475	1,874	12,490	1,033	
DISEASES OF THE GENERATIVE SYSTEM. —Continued.						
(FEMALE ORGANS.)						
Metritis	...	2	...	2	...	
Endometritis	...	1	...	1	...	
Erosion of Cervix	...	3	...	3	...	
Hyperplasia	...	...	...	...	...	
Retroflexion	...	2	...	2	...	
Vulva, Inflammation	1	1	...	2	...	
Abscess	1	3	...	4	...	
Ulcer	1	6	...	7	...	
Soft Chancre	2	19	...	21	6	
Fistula Vesico, Vaginal	...	...	...	...	...	
Other Diseases	...	14	...	14	...	
Amenorrhœa	...	1	...	1	...	
Dysmenorrhœa	...	...	...	...	...	
Menorrhagia	...	...	...	...	...	
AFFECTIONS CONNECTED WITH PREGNANCY.						
Abortion	...	...	...	...	...	
Pregnancy	3	173	3	176	5	
DISEASES OF THE FEMALE BREAST.						
Mastitis	...	...	...	...	...	
DISEASES OF THE ORGANS OF LOCOMOTION.						
Periostitis	2	15	...	17	...	
Caries	2	9	3	11	1	
Necrosis	2	19	3	21	2	
Arthritis	1	64	...	65	10	
Synovitis	4	34	1	38	6	
Ankylosis	...	3	...	3	1	
Spondylitis	...	...	...	...	...	
Caries of Spine	2	4	4	6	1	
Myalgia	2	15	...	17	...	
Other Diseases	...	7	...	7	2	
DISEASES OF THE CONNECTIVE TISSUE.						
Cellulitis	3	63	5	66	4	
Abscess	17	254	7	271	17	
Œdema	...	8	...	8	2	
Gangrene	4	2	...	6	1	
Elephantiasis	...	...	...	...	...	
Other Diseases	...	9	...	9	1	
DISEASES OF THE SKIN.						
Urticaria	...	23	...	23	...	
Eczema	2	55	...	57	1	
Impetigo	...	1	...	1	...	
Boil	1	47	...	48	2	
Carbuncle	...	11	...	11	...	
Herpes	...	9	...	9	...	
Bedsore	...	2	2	2	...	
Pemphigus	...	...	...	...	...	
Psoriasis	...	13	...	13	...	
Dermatitis exfoliata	...	...	...	...	...	
<i>Carried forward ...</i>	1,065	12,367	1,902	13,432	1,095	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	1,065	12,367	1,902	13,432	1,095	
DISEASES OF THE SKIN. —Continued.						
Wart ...	1	...	...	1	...	
Acne ...	1	4	...	5	1	
Whitlow ...	...	6	...	6	...	
Ulcer ...	55	1,058	1	1,113	96	
Other Diseases ...	...	31	...	31	1	
INJURIES ...	43	1,338	42	1,381	33	
POISONS.						
Mercury ...	...	1	...	1	...	
Alcohol ...	...	15	...	15	...	
Belladonna ...	...	...	...	...	...	
Opium ...	...	3	2	3	...	
Others ...	...	8	2	8	...	
PARASITES.						
Round Worm ...	...	1	...	1	...	
Tape-worm ...	...	...	...	...	...	
Ankylostoma Duodenale ...	4	78	15	82	16	
Filiariasis ...	...	...	...	...	...	
Scabies ...	...	123	...	123	3	
Ringworm ...	5	7	...	12	...	
Dhobi Itch ...	...	...	...	...	...	
Others ...	...	7	...	7	...	
OBSERVATIONS. ...	3	132	...	135	...	
NO DISCOVERABLE DISEASE ...	1	185	2	186	..	
TOTAL ...	1,178	15,364	1,966	16,542	1,245	
OPERATIONS.						
EXCISION OF TUMOURS.						
Non-Malignant ...	...	16	...	...	...	
Malignant ...	...	6	...	...	...	
ON THE SKIN AND SUBCUTANEOUS TISSUES.						
Incision of Abscesses ...	...	127	...	...	...	
„ Ischio-Rectal Abscess ...	...	10	...	...	...	
Multiple Incisions for Cel- lulitis ...	...	10	...	...	...	
Curetting of Ulcers ...	...	65	...	...	...	
Avulsion of Toe Nail ...	...	2	...	...	...	
Excision of Varicose Veins. ...	...	1	...	...	...	
Neurectomy ...	...	1	...	...	...	
Excision of Lymphatic Glands ...	...	59	...	...	...	
Removal of Foreign Bodies. ...	...	2	...	...	...	
Skin Grafting ...	...	12	...	...	...	
ON MUSCLES, TENDONS AND FASCIÆ.						
Union of Divided Tendon ...	...	3	..	...	...	
LIGATURE OF ARTERIES.						
For Aneurism (Popliteal and Carotid) ...	...	3	...	...	...	
For Hæmorrhage ...	...	1	...	...	...	
For Empyema ...	...	1	...	...	...	
<i>Carried forward ...</i>	...	319	...	...	...	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sion.	Deaths.			
<i>Brought forward ...</i>	...	319	...	...	...	
OPERATIONS.— <i>Contd.</i>						
ON EAR, NOSE, THROAT AND EYE.						
Removal of Foreign Body ...	...	2	...	...	...	
Removal of Adenoid Growths ...	...	1	...	...	...	
Extraction of Teeth ...	...	1	...	...	...	
Tracheotomy ...	...	5	...	...	...	
For Cut Throat ...	...	1	...	...	...	
For Hare Lip ...	...	3	...	...	...	
For Pterygium ...	...	2	...	...	...	
For Staphyloma ...	...	1	...	...	...	
Excision of Eyeball ...	...	10	...	...	...	
Iridectomy ...	...	2	...	...	...	
Extraction of Lens ...	...	2	...	...	...	
For Entropion ...	...	4	...	...	...	
For Diseases of Lacrymal Gland ...	...	1	...	...	...	
ON ABDOMEN.						
Laprotomy for:—						
Gastroplasty ...	...	1	...	...	...	
Intestinal Anastomosis ...	...	1	...	...	...	
Opening and Draining Ap- pendix Abscess ...	...	3	...	...	...	
Excision of Appendix Ver- miformis ...	...	6	...	...	...	
Abscess of Liver ...	...	5	...	...	...	
Do. Exploration... ..	...	5	...	...	...	
Splenectomy ...	...	1	...	...	...	
Tuberculous Peritonitis ...	...	1	...	...	...	
Suture of Intestine ...	...	1	...	...	...	
For Inguinal Hernia:—						
Strangulation ...	...	6	...	...	...	
Radical Cure ...	...	25	...	...	...	
General ...	...	12	...	...	...	
ON RECTUM AND ANUS.						
Imperforate Anus ...	...	1	...	...	...	
Anal Fistula ...	...	25	...	...	...	
Hæmorrhoids ...	...	18	...	...	...	
Prolapse ...	...	1	...	...	...	
Examination ...	...	4	...	...	...	
Stricture, Rectum ...	...	1	...	...	...	
Removal of Papilloma of Anus ...	...	1	...	...	...	
ON BLADDER.						
Sounding ...	...	1	...	...	...	
Lithotrity ...	...	1	...	...	...	
ON URETHRA.						
Urethroscopy ...	...	2	...	...	...	
Urethrotomy, External ...	...	11	...	...	...	
Extravasation of Urine ...	...	6	...	...	...	
Removal of Calculus ...	...	2	...	...	...	
ON THE MALE GENERATIVE ORGANS.						
Circumcision ...	...	77	...	...	...	
Phimosis ...	...	5	...	...	...	
Removal of Testis ...	...	6	...	...	...	
Hydrocele ...	...	27	...	...	...	
Other ...	...	1	...	...	...	
<i>Carried forward ...</i>	...	612	...	...	...	

Return of Diseases and Deaths in 1909 at the Singapore Hospitals.—Concluded.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	...	612	...	...	...	
OPERATIONS.—Concl'd.						
ON FEMALE GENERATIVE ORGANS.						
Ovariectomy ...	...	2	...	...	...	
Curetting of Uterus ...	...	3	...	...	...	
Dilatation of Cervical Canal. ...	...	1	...	...	...	
Vaginal Examination ...	...	4	...	...	...	
ON BONES AND JOINTS.						
Amputations ...	...	55	...	...	...	
Incision for Osteomyelitis ...	...	4	...	...	...	
Wiring (Tibia and Patella) ..	...	3	...	...	...	
Setting Fractures (simple and compound) ...	...	5	...	...	...	
Removal of Sequestra ...	...	16	...	...	...	
Reduction of Dislocation ...	...	5	...	...	...	
Passive Movement ...	...	4	...	...	...	
Incision of Joints ...	...	1	...	...	...	
Trephining of Skull ...	...	5	...	...	...	
Lumbar Puncture ...	...	1	...	...	...	
Resection of Rib ...	...	18	...	...	...	
Psoas Abscess ...	...	1	...	...	...	
General ...	...	16	...	...	...	
ON THE THYROID BODY.						
Removal of one lobe of Gland ...	...	1	...	...	...	
TOTAL ...	...	757	...	...	...	

LABUAN.

Return of the Statistics of Population for the Year 1909.

				Europeans.	Eurasians.	Malays.	Chinese.	Tamils.	Other Nationalities.	TOTAL.
Number of inhabitants in 1908 ...				Records	unreliable.		...	...	...	8,245
„	Births during the year	1909		3	0	123	50	3	4	...
„	Deaths	„ „ 1909		1	0	117	69	5	5	...
„	Immigrants	„ „ 1909	} No records obtainable.							
„	Emigrants	„ „ 1909								
Number of inhabitants in 1909 ...				...	...	...	...	...	...	8,231
Increase	...	...	...	2	...	6	...	...	...	...
or										
Decrease	...	...	...	...	...	...	19	2	1	14

Meteorological Return for the Year 1909.

			TEMPERATURE.				RAINFALL.		WINDS.		REMARKS.	
			Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.		General Direction.
			No instruments for recording.	No instruments for recording.	°F	°F	°F	°F	Ins.	%		No instruments for recording.
January	...	...			85'12	77'54	7'58	83'28	3'98	72'45	N.E.	
February	...	...			84'64	76'21	8'43	82'66	6'99	76'09	N.E.	
March	...	...			86'19	76'67	9'52	83'44	5'78	71'35	N.W.	
April	...	...			87'10	78'00	9'10	84'30	7'25	67'45	S.W.	
May	...	...			88'60	77'58	11'02	83'38	11'23	68'90	S.W.	
June	...	...			85'80	76'83	8'97	83'47	16'56	68'86	S.W.	
July	...	...			87'19	75'45	11'74	82'11	6'95	70'19	S.W.	
August	...	...			87'38	76'25	11'13	82'55	14'39	73'03	S.W.	
September	...	...			86'86	75'13	11'73	83'51	7'70	67'80	S.W.	
October	...	...			88'74	77'90	10'84	83'25	14'50	68'19	S.W.	
November	...	...			85'83	79'16	6'67	85'75	9'31	71'16	S.W.	
December	...	...	84'54	74'59	9'95	82'90	9'36	69'67	S.W.			
Total ...			...	...	1,037'99	921'31	116'68	1,000'40	114'00	845'94	...	...
Monthly Average ...			...	...	86'49	76'77	9'72	83'36	9'50	70'49	...	...

LABUAN.

Return of Diseases and Deaths in 1909 at Labuan Hospital.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri ...	2	18	1	20	3	
Dysentery ...	...	7	1	7	1	
Gonorrhœa ...	...	11	...	11	...	
Malaria:—						
Tertian ...	...	88	...	88	...	
Quartan ...	...	3	...	3	...	
Aestivo-autumnal ...	...	9	2	9	...	
Chronic ...	...	12	1	12	...	
Syphilis, Primary ...	...	1	...	1	...	
„ Secondary ...	...	3	...	3	...	
Tuberculosis, Including Pul- monary ...	2	9	7	11	1	
Yaws ...	...	1	...	1	...	
INTOXICATIONS.						
Alcoholism ...	1	2	...	3	...	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRE- CEDING GROUPS.						
Anæmia ...	...	8	...	8	...	
Osteo Arthritis ...	...	1	...	1	...	
CERTAIN MORBID CONDITIONS INCIDENT TO VARIOUS PARTS.						
Cysts Inflamed Ranula ...	...	1	...	1	...	
DISEASES OF THE NERVOUS SYSTEM.						
NERVOUS DISORDERS.						
Epilepsy, Major ...	...	1	...	1	...	
Dementia Secondary to Mal. fever ...	...	2	2	2	...	
DISEASES OF THE EYE.						
Conjunctivitis Catarrhal ...	...	2	...	2	...	
„ Granular ...	...	1	...	1	...	
DISEASES OF THE CIRCULATORY SYSTEM.						
Valvular diseases Mitral ...	1	2	...	3	...	
Mitral and aortic ...	...	2	1	2	...	
Thrombosis int. Saph. Vein ...	...	2	...	2	...	
Varix ...	...	1	...	1	...	
DISEASES OF THE RESPIRATORY SYSTEM.						
Bronchitis ...	...	9	...	9	...	
DISEASES OF THE DIGESTIVE SYSTEM.						
Stomatitis ...	...	1	...	1	...	
Pharyngitis, Granular ...	...	3	...	3	...	
Gastritis, Catharrhal ...	...	1	...	1	...	
Dyspepsia ...	...	1	...	1	...	
Enteritis, Catarrhal ...	...	5	...	5	...	
Appendicitis ...	...	1	...	1	...	
Carried forward ...	6	208	15	214	5	

Return of Diseases and Deaths in 1909 at Labuan Hospital—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	6	208	15	214	5	
DISEASES OF THE DIGESTIVE SYSTEM.— <i>Continued.</i>						
Colitis, Catarrhal ...	...	2	...	2	...	
Diarrhœa ...	...	2	1	2	...	
Constipation ...	...	3	...	3	...	
Hæmorrhoids, Internal ...	...	2	...	2	...	
Cholecystitis ...	..	1	...	1	...	
DISEASES OF THE LYMPHATIC SYSTEM.						
Splenitis ...	...	1	...	1	...	
Glands, Suppuration of ...	..	3	...	3	...	
Lymphangitis ...	...	1	...	1	...	
Elephantiasis ...	...	2	...	2	...	
DISEASES OF THE URINARY SYSTEM.						
Nephritis, Chronic ...	...	1	...	1	...	
DISEASES OF THE GENERATIVE SYSTEM.						
MALE ORGANS.						
Abcess of Scrotum ...	...	1	...	1	...	
FEMALE ORGANS.						
Fistula Vesico, Vaginal ...	...	1	...	1	...	
DISEASES OF THE ORGANS OF LOCOMOTION.						
Bone Periostitis Tibia ...	...	1	...	1	...	
Joints Synovitis Knee ...	...	2	...	2	...	
Muscles Myalgia ...	...	1	...	1	...	
Tendon Sheaths Thecal abcess ...	...	1	...	1	...	
DISEASES OF THE CONNECTIVE TISSUE.						
Abcess ...	...	5	...	5	...	
DISEASES OF THE SKIN.						
Boil ...	...	4	...	4	...	
Erythema Intertrigo ...	...	1	...	1	...	
Dermatitis exfoliativa ...	...	1	...	1	...	
" Foxic ...	...	1	...	1	...	
Tinea Versicolor ...	...	1	...	1	...	
Scabies ...	..	1	...	1	...	
Ulcers ...	...	5	...	5	...	
INJURIES OF ANATOMICAL REGIONS.						
Head, Wound of Scalp ...	...	4	...	4	...	
Fractured base of Skull ...	...	1	1	1	...	
Wound of skull, Parang ...	...	1	...	1	...	
Organs of Generation, Laceration of Urethra ...	...	1	...	1	...	
<i>Carried forward ...</i>	6	259	17	265	5	

Return of Diseases and Deaths in 1909 at Labuan Hospital.—Concluded.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	6	259	17	265	5	
INJURIES OF ANATO- MICAL REGIONS.— <i>Continued.</i>						
Upper extremity Comp. Com. Fracture Radius and Ulna ...	...	1	...	1	...	
Simple Fracture Radius and Ulna ...	...	1	...	1	1	
Comp. Com. Fracture Phalanges ...	...	1	...	1	...	
Comp. Dislocation Radius and Ulna backwards ...	...	1	...	1	...	
Lower extremity Simple Fracture Tibia ...	...	...	...	1	...	
Comp. Com. Fracture Phalanges ...	..	1	...	1	...	
Comp. Com. Fracture Patella into Knee joint ...	...	1	...	1	...	
Other wounds and injuries...	...	24	...	24	...	
POISONS.						
Opium, Chronic ...	...	1	...	1	...	
Quinine, Acute ...	...	1	...	1	...	
PARASITES.						
Ankylostoma Duodenale ...	...	1	...	1	...	
No Discoverable Diseases ...	...	8	...	8	...	
Total ...	7	300	17	307	6	
OPERATIONS.						
Excision of Tumours, Non- Malignant ...	...	1	...	...	...	
Incision and drainage of Abscesses under anesthetic ...	...	5	...	...	...	
Excision of Lymphatic Glands ...	...	3	...	...	...	
Curettng Ulcers ...	...	1	...	...	...	
Knee Joint Incised ...	...	1	...	...	...	
Amputations ...	...	2	...	...	...	
Disarticulations ...	...	2	...	...	...	
Tenotomy Int. Rectus for Strabismus ...	...	1	...	...	...	
Pterygium ...	...	1	...	...	...	
Empyema with resection of rib ...	...	1	...	...	...	
Incision and suture male Urethra ...	...	1	...	...	...	
Elephantiasis Scrotum ...	...	1	...	...	...	
Total ...	...	20	...	...	...	

PENANG AND DINDINGS.

Return of the Statistics of Population for the Year 1909.

	Europeans.	Eurasians.	Malays.	Chinese.	Tamils.	Other Nationalities.	Unknown.	TOTAL.
Number of inhabitants in 1909 ...	914	1,833	33,096	77,942	17,840	2,072	...	133,697 P.
„ Births during the year 1909	27	50	957	1,205	406	58	3	4,575 D.
„ Deaths „ „ 1909	15	55	134	19	16	...	...	2,706 P.
„ Immigrants „ 1909	...	...	813	2,896	1,156	58	13	169 D.
„ Emigrants „ 1909	No data available.			68	53	...	...	5,006 P.
Number of inhabitants in 1908 ...	923	1,810	33,237	77,126	17,947	2,024	...	232 D.
Increase	...	23	...	816	...	48	...	133,067 P.
or	...	...	...	...	...	...	...	887 P.
Decrease	9	...	141	...	107	...	...	59 D.
								257 P.

Metcorological Return for the Year 1909.

			TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
			Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
January	...	...	°F 143·4	°F 72·2	°F 88·7	°F 74·8	°F 13·9	°F 81·4	Inches. 3·39	% 80·0	N.W.	280	
February	...	...	148·0	71·3	88·8	74·8	14·0	81·6	5·19	78·0	N.W.	300	
March	...	...	155·9	71·5	91·9	75·4	16·5	85·5	3·32	74·0	N.W.	270	
April	...	...	149·7	71·2	90·0	75·3	14·7	82·2	2·32	82·0	N.W.	268	
May	...	...	147·0	70·7	91·3	75·3	16·0	82·5	3·11	84·0	N.E.	270	
June	...	...	142·3	70·1	90·1	74·7	15·4	80·6	14·76	86·0	N.W.	255	
July	...	...	142·0	70·0	90·0	74·7	15·3	81·1	6·86	84·0	S.	281	
August	...	...	147·0	70·2	89·3	74·8	14·5	80·6	14·76	86·0	S.E.	272	
September	...	...	144·6	70·6	89·1	74·9	14·2	81·7	26·57	92·0	S.	255	
October	...	...	145·9	70·2	88·9	71·3	17·6	81·5	32·11	83·0	N.W.	288	
November	...	...	141·9	...	88·7	70·6	18·1	80·8	15·68	84·0	N.W.	273	
December	...	...	140·5	...	89·1	70·1	19·0	81·2	2·38	79·0	N.W.	255	
Mean	...	...	145·6	59·0	89·6	73·8	15·7	81·7	10·86	82·66			

PENANG.

*Return of Diseases and Deaths in 1909 at the following Institutions:—
General, District, Lock, Criminal Prison, Quarantine Camp, Jelutong, European
Small-pox, Balik Pulau, Leper Hospital, Pulau Jerejak, Lumut Hospitals and Female
Leper Ward, Jelutong.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri	52	190	33	242	32	
Chicken-pox	...	34	...	34	...	
Cholera	...	1	1	1	...	
Dengue	...	2	...	2	...	
Dysentery	15	387	149	402	15	
Endocarditis, Ulcerative	...	1	1	1	...	
Enteric Fever	1	7	2	8	...	
Erysipelas	...	3	2	3	...	
Gonorrhœa	5	100	...	105	4	
Arthritis	1	11	...	12	3	
Ophthalmia	2	13	...	15	3	
Iritis	...	2	...	2	1	
Leprosy	385	246	139	631	438	
Mycetoma	...	1	...	1	...	
Mal. Unclassified	3	148	8	151	8	
Mal., Benign Tertian	9	405	16	414	6	
Mal., Pernicious	9	194	34	203	5	
Mal., Cachexia	4	75	2	79	4	
Measles	...	8	...	8	...	
Mumps	...	3	...	3	...	
Phagedœna	3	19	6	22	...	
Pneumonia	5	48	19	53	...	
Pyæmia	...	2	...	2	...	
Pyrexia	1	169	...	170	3	
Sub-acute Rheumatism	25	228	8	253	21	
Septicæmia	...	1	...	1	...	
Small-pox	...	3	2	3	...	
Syphilis, Primary	...	63	...	63	7	
Secondary	56	372	16	428	48	
Tertiary	...	66	4	66	6	
Tetanus	...	10	5	10	1	
Tuberculosis	2	22	6	24	1	
INTOXICANTS.						
Alcoholism	2	26	...	28	...	
Morphia Habit	3	26	2	29	1	
Opium	1	3	...	4	...	
GENERAL DISEASES.						
Anæmia	35	348	76	383	29	
Anæmia, Pernicious	...	2	1	2	...	
Diabetes	...	4	1	4	...	
Exophthalmic Goitre	...	1	...	1	...	
Gout	...	1	...	1	...	
Lymphadenoma	1	1	...	2	1	
Obesity	...	1	...	1	...	
Rheumatoid Arthritis	1	5	...	6	1	
CERTAIN MORBID CONDI- TIONS INCIDENT TO VARIOUS PARTS.						
Malformations	...	5	...	5	1	
New-growth, non-Malignant	...	23	2	23	1	
Malignant	...	9	3	9	2	
Cyst	...	9	1	9	2	
DISEASES, NERVOUS SYSTEM.						
Neuritis	4	17	1	21	1	
Multiple	...	3	2	3	...	
Carried forward...	625	3,318	542	3,943	645	

Return of Diseases and Deaths in 1909 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	625	3,318	542	3,943	645	
DISEASES, NERVOUS SYSTEM.—Continued.						
Myelitis Hæmorrhage ...	...	1	1	1	...	
Spastic Paraplegia ...	...	7	...	7	3	
Lateral Sclerosis ...	...	2	...	2	1	
Locomotor Ataxia ...	2	4	2	6	...	
Disseminated Sclerosis ...	...	...	...	...	...	
Hæmorrhage ...	...	5	2	5	...	
Cerebral Hæmorrhage ...	...	3	3	3	...	
Apoplexy ...	...	1	1	1	...	
Paralysis ...	...	2	1	2	...	
Paraplegia ...	1	2	2	3	1	
Hemiplegia ...	10	42	18	52	8	
Torticollis ...	...	1	...	1	...	
Convulsions, Infantile ...	...	1	1	1	...	
Epilepsy ...	1	4	1	5	...	
Migraine ...	...	5	...	5	...	
Neuralgia ...	...	12	1	12	...	
Sciatica ...	...	5	...	5	...	
Hysteria ...	...	1	...	1	...	
Neurasthenia ...	...	5	...	5	1	
Mania ...	...	1	1	1	...	
Melancholia ...	...	1	...	1	...	
Dementia ...	4	15	2	19	5	
DISEASES OF EYE.						
Conjunctivitis ...	...	31	...	31	3	
" Catarrhal ...	...	1	...	1	...	
" Purulent ...	...	1	...	1	...	
Trachoma ...	3	20	...	23	4	
Keratitis ...	...	2	...	2	...	
Keratitis, Interstitial ...	...	1	...	1	...	
Ulcer Cornea ...	1	7	...	8	...	
Opacity Cornea ...	...	10	...	10	3	
Staphyloma ...	...	4	...	4	...	
Iritis ...	2	7	...	9	1	
Hypopyon ...	...	1	...	1	...	
Optic Neuritis ...	1	...	1	1	...	
Optic Atrophy ...	...	6	...	6	...	
Anæmia Retina ...	...	8	...	8	...	
Cataract ...	...	4	...	4	1	
" Traumatic ...	...	1	...	1	...	
Shrunken Eyeball ...	...	1	...	1	...	
Amaurosis ...	...	6	...	6	1	
Abscess Orbit ...	...	2	...	2	...	
DISEASES OF EAR.						
Otitis, External ...	...	3	...	3	...	
Suppurat. Otitis Media ...	...	7	1	7	...	
DISEASES OF NOSE.						
Necrosis Nasal Bone ...	...	1	1	1	...	
DISEASES CIRCULATORY SYSTEM.						
Pericarditis ...	...	1	1	1	...	
Valvular D. H. Mitral ...	...	14	5	14	...	
" Aortic ...	...	1	1	1	...	
Dilatation Heart ...	...	10	5	10	1	
Arterial Sclerosis ...	1	...	...	1	1	
Aneurysm ...	...	4	3	4	1	
" Traumatic ...	1	...	1	1	...	
Varix ...	...	2	...	2	...	
<i>Carried forward...</i>	652	3,594	597	4,246	680	

Return of Diseases and Deaths in 1909 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	652	3,594	597	4,246	680	
DISEASES OF RESPIRATORY SYSTEM.						
Asthma	...	26	...	26	...	
Laryngitis	...	2	...	2	...	
Bronchitis	1	42	1	43	...	
" Catarrhal	...	9	2	9	...	
Bronchiectasis	...	1	1	1	...	
Congestion Lungs	1	20	6	21	...	
Broncho-Pneumonia	...	2	1	2	...	
Gangrene Lungs	...	1	...	1	...	
Fibroid Phthisis	1	9	3	10	3	
Pneumonic Phthisis	2	4	2	6	...	
Phthisis	24	287	150	311	19	
Pleurisy	1	7	...	8	...	
Empyema	...	4	2	4	2	
DISEASES OF DIGESTIVE SYSTEM.						
Stomatitis	...	3	...	3	...	
" Ulcerative	...	1	1	1	...	
Alveolar Abscess	...	1	...	1	...	
Ulcer Tongue	...	1	...	1	...	
Sore-throat	...	3	...	3	...	
Tonsillitis	...	5	...	5	...	
Hypertrophy of Tonsils	...	1	...	1	...	
Pharyngitis	4	73	...	77	...	
" Ulcerative	1	10	1	11	...	
Gastritis	...	9	...	9	...	
Ulceration Stomach	...	1	1	1	...	
Dyspepsia	...	46	1	46	1	
Cardialgia	...	1	...	1	...	
Anorexia	...	1	...	1	...	
Appendicitis	...	3	1	3	...	
Colitis	...	6	1	6	...	
" Ulcerative	...	12	4	12	4	
Ulceration Cæcum	3	1	1	4	...	
Sprue	1	5	1	6	1	
Hernia, Inguinal	...	18	1	18	...	
" Femoral	...	1	...	1	...	
Intestinal Obstruction	...	2	2	2	...	
Diarrhœa	28	207	44	235	13	
Constipation	...	38	...	38	...	
Colic	1	26	...	27	...	
Ischio Rectal Abscess	...	2	...	2	1	
Ulcer Anus	...	5	...	5	1	
Fissure Anus	...	1	...	1	...	
Fistula in Ano	1	15	1	16	3	
Hæmorrhoids	1	17	...	18	1	
Prolapse Ani	1	2	...	3	...	
Condyloma Ani	...	3	...	3	1	
Prolapse Rectum	...	1	...	1	...	
Stricture Rectum	...	1	1	1	...	
Hepatitis, Acute	...	2	...	2	...	
Hepatic Abscess	...	8	3	8	...	
Cirrhosis Liver	...	59	28	65	4	
Hepatic Congestion	...	2	...	2	...	
Jaundice	...	13	10	13	...	
Gall Stone	...	1	1	1	...	
Peritonitis	...	2	1	2	...	
Ascites	...	6	1	6	...	
DISEASES OF LYMPHATIC SYSTEM.						
Bubo	7	81	...	88	6	
Suppuration Glands	3	1	...	4	...	
Lymphangitis	1	6	...	7	...	
Suppuration	...	4	...	4	...	
<i>Carried forward...</i>	740	4,715	870	5,455	740	

Return of Diseases and Deaths in 1909 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	740	4,715	870	5,455	740	
DISEASES, URINARY SYSTEM.						
Acute Nephritis ...	...	4	2	4	...	
Bright's Disease ...	2	17	6	19	...	
Chronic Nephritis ...	...	2	...	2	...	
Abscess Kidney ...	...	1	...	1	...	
Pyonephrosis ...	...	2	2	2	...	
Moveable Kidney ...	...	1	...	1	...	
Renal Calculus ...	...	1	...	1	...	
Cystitis ...	...	3	...	3	...	
Irritable Bladder ...	...	2	...	2	...	
Retention of Urine ...	...	4	1	4	...	
Hæmaturia ...	...	4	...	4	...	
DISEASES, GENERATIVE SYSTEM. (MALE.)						
Stricture Urethra ...	...	5	...	5	...	
Urethral Fistula ...	...	8	...	8	...	
Phimosis ...	...	1	...	1	...	
Paraphimosis ...	...	4	...	4	1	
Ulcer Penis ...	7	67	1	74	8	
Soft Chancre ...	2	36	...	38	2	
Sloughing Scrotum ...	...	5	...	5	...	
Varicocele ...	...	1	...	1	...	
Hydrocele ...	1	12	...	13	...	
Hæmatocele ...	...	1	...	1	...	
Orchitis ...	...	14	...	14	...	
Hernia Testis ...	...	6	...	6	...	
DISEASES, GENERATIVE SYSTEM. (FEMALE.)						
Oophoritis ...	1	...	...	1	...	
Erosion Cervix ...	...	5	...	5	...	
Ulcer Vulva ...	1	1	...	2	1	
Leucorrhœa ...	...	2	...	2	1	
Natural Labour ...	...	14	...	14	...	
Difficult Labour ...	...	1	...	1	...	
Cerebral Thrombosis ...	...	1	...	1	...	
Premature Birth ...	...	1	...	1	1	
Retention Placenta ...	...	1	...	1	...	
Puerperal Sapræmia ...	...	2	...	2	...	
Pregnancy ...	...	1	...	1	...	
DISEASES, ORGANS OF LOCOMOTION.						
Periostitis ...	...	1	...	1	...	
Caries ...	3	7	1	10	...	
Necrosis ...	2	10	1	12	...	
Arthritis ...	...	7	1	7	3	
Synovitis ...	...	14	...	14	...	
" Chronic ...	...	20	...	20	2	
Suppuration Knee Joints ...	...	2	1	2	...	
Caries Spine ...	...	4	...	4	1	
Psoas Abscess ...	1	...	1	1	...	
Myalgia ...	...	20	...	20	...	
Lumbago ...	...	3	...	3	...	
Sinus ...	1	12	1	13	1	
DISEASES OF CONNECTIVE TISSUE.						
Cellulitis ...	5	45	8	50	3	
Abscess ...	13	141	5	154	11	
Elephantiasis ...	2	17	2	19	...	
<i>Carried forward ..</i>	781	5,248	903	6,029	775	

Return of Diseases and Deaths in 1909 at the Penang Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	781	5,248	903	6,029	775	
DISEASES OF SKIN.						
Urticaria ...	...	3	...	3	...	
Eczema ...	1	29	...	30	4	
Impetigo ...	...	1	...	1	...	
Boil ...	...	7	...	7	...	
Carbuncle ...	...	10	...	10	2	
Herpes ...	...	3	...	3	...	
Pemphigus ...	...	2	...	2	1	
Ulcer ...	72	675	16	747	62	
Onychia ...	...	4	...	4	1	
INJURIES.						
General ...	1	61	21	62	4	
Local ...	12	339	10	351	21	
POISONS.						
Snake bite ...	...	3	1	3	...	
Caustic ...	...	2	2	2	...	
Opium ...	...	3	2	3	...	
Dog bite ...	...	2	...	2	...	
Centipede—Venoma of	...	1	...	1	...	
Stramonium ...	...	1	...	1	...	
Venoma of Fish ...	...	1	...	1	...	
PARASITES.						
Itch ...	6	127	...	133	2	
Tinea Circinata ...	...	5	...	5	...	
„ Imbricata ...	3	11	...	14	3	
Ascaris Lumbricoides ...	1	8	1	9	...	
Ankylostomiasis ...	3	77	19	80	8	
Filaria Medinensis ...	...	2	...	2	1	
Malingering ...	...	1	...	1	...	
Observation ...	8	149	2	157	6	
N. A. D. ...	1	70	...	71	3	
Nil ...	...	25	...	25	...	
GRAND TOTAL ...	889	6,870	977	7,759	893	
OPERATIONS PERFORMED IN 1909.						
Skin grafting ...	...	14	...	...	...	
Trephining ...	...	4	...	...	...	
Excision Eyeball ...	...	1	...	...	...	
Plastic Operations ...	...	4	...	...	...	
Excision of Tonsil ...	...	1	...	...	...	
Ligature Artery Femoral ...	...	...	...	...	...	
(for Aneurysm ...	...	1	...	...	...	
Ligature Subclavian 3rd	...	...	...	...	...	
portion ...	...	...	...	...	...	
(for Hæmorrhage)	...	1	...	...	...	
Pleurisy Aspirated ...	...	1	...	...	...	
Empyema resection of rib...	...	1	...	...	...	
Liver Abscess Laparotomy	...	...	...	...	...	
Drainage of pus ...	...	1	...	...	...	
Hepatitis aspirated ...	...	1	...	...	...	
Fistula in Ano, Slitting up	...	9	...	...	...	
Ischo Rectal Abscess scrap-	...	1	...	...	...	
ing ...	...	2	...	...	...	
Ascites Paracentesis ...	...	...	...	...	...	
Hernia double Inguinal	...	...	...	...	...	
reduced ...	...	1	...	...	...	
Hernia Radical cure ...	...	13	...	...	...	
Hernia Testis scraping ...	...	2	...	...	...	
<i>Carried forward ...</i>	...	58	...	...	...	

Return of Diseases and Deaths in 1909 at the Penang Hospitals.—Concluded.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	...	58	...	...	...	
OPERATIONS						
PERFORMED IN 1909.—						
<i>Continued.</i>						
Penetrating Wound Abdomen	...	...	...	...	...	
Sulined Liver & Abdominal	...	...	...	...	...	
Wall ...	...	1	...	...	...	
Penetrating Wound Abdomen	...	...	...	...	...	
Laparotomy sutured Abdo-	...	...	...	...	...	
minal Wall ...	...	1	...	...	...	
Penetrating Wound Abdomen	...	...	...	...	...	
Omentum cut and Wound	...	...	...	...	...	
Sutured ...	...	1	...	...	...	
Obstruction bowels Laparo-	...	...	...	...	...	
tomy ...	...	2	...	...	...	
Abscess incised ...	...	11	...	...	...	
Hernia Strangulated ...	...	2	...	...	...	
Suppurative Appendicitis ...	...	...	...	...	...	
Laparotomy and drainage ...	...	1	...	...	...	
Appendicitis excision and	...	...	...	...	...	
drainage ...	...	1	...	...	...	
Foreign body in bladder	...	...	...	...	...	
removed ...	...	1	...	...	...	
Elephantiasis Scrotum re-	...	...	...	...	...	
moved ...	...	3	...	...	...	
Amputations ...	...	24	...	...	...	
Tubercular Glands neck	...	...	...	...	...	
scraping ...	...	2	...	...	...	
Tubercular Glands neck	...	...	...	...	...	
removal ...	...	3	...	...	...	
Rupture Urethra ruineal	...	...	...	...	...	
section ...	...	1	...	...	...	
Rupture Urethra Median	...	...	...	...	...	
Lithotomy ...	...	1	...	...	...	
Perineal Fistula Slit up ...	...	2	...	...	...	
Hydrocele Radical cure ...	...	1	...	...	...	
Septum of Vagina Incision	...	...	...	...	...	
Suppuration Uterine Fibroid	...	...	...	...	...	
Explorotomy and Drainage	...	...	...	...	...	
Urethral Abscess opened and	...	...	...	...	...	
drained ...	...	1	...	...	...	
Circumcision ...	...	10	...	...	...	
Castration ...	...	1	...	...	...	
Rupture Tendo Achillis	...	...	...	...	...	
incision and sutured ...	...	1	...	...	...	
Severed Tendo Achillis	...	...	...	...	...	
Paring and Salusing ...	...	1	...	...	...	
Necrosis bone removed ...	...	3	...	...	...	
Necrosis Scraping ...	...	4	...	...	...	
Suppuration shoulder Joint	...	...	...	...	...	
pus evacuated ...	...	1	...	...	...	
Tubercular hip abscess pus	...	...	...	...	...	
evacuated ...	...	2	...	...	...	
Tubercular Knee partial	...	...	...	...	...	
excision ...	...	1	...	...	...	
Tubercular foot Incision and	...	...	...	...	...	
drainage ...	...	1	...	...	...	
Tubercular Abscess Incised	...	...	...	...	...	
and scraped ...	...	1	...	...	...	
Dislocation ankle reduced ...	...	1	...	...	...	
Suppuration Knee joint, joint	...	...	...	...	...	
opened and drained ...	...	3	...	...	...	
Fracture femur neck reduced	...	...	...	...	...	
Dislocation hip attempted	...	...	...	...	...	
reduction ...	...	1	...	...	...	
Dislocation shoulder at-	...	...	...	...	...	
tempted reduction ...	...	1	...	...	...	
<i>Carried forward ...</i>	...	152	...	...	...	

Return of Diseases and Deaths in 1909 at the Penang Hospitals.—Concluded.

DISEASES	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	...	152	...	...	...	
OPERATIONS						
PERFORMED IN 1909.—						
<i>Concluded.</i>						
Cellulitis arms opened ...	...	1	...	...	...	
„ leg incised ...	...	2	...	...	...	
Sinus arm enlarged and scraped ...	...	1	...	...	...	
Sinus buttock opened and scraped ...	...	2	...	...	...	
Sinus groin opened ...	...	1	...	...	...	
Chronic Ulcer excision ...	...	12	...	...	...	
Phagedœna hand scraped ...	...	2	...	...	...	
Carbuncle back incision and partial excision ...	...	1	...	...	...	
Carbuncle shoulder incision and excision ...	...	1	...	...	...	
Superficial gangrene scraping and excision of tissue ...	...	1	...	...	...	
Cyst excision ...	...	1	...	...	...	
Cystic Hygroma excision ...	...	1	...	...	...	
Uterine Fibroid Laparotomy too far attached for removal ...	...	1	...	...	...	
Uterine fibroid Laparotomy removal ...	...	2	...	...	...	
Uterine fibroid Laparotomy and Explorotomy ...	...	1	...	...	...	
Ganglion of foot excised ...	...	1	...	...	...	
Ovarian Cyst Laparotomy and removal ...	...	1	...	...	...	
Sebaceous Cyst of hip re- opening cavity ...	...	1	...	...	...	
Sebaceous Cyst removal ...	...	1	...	...	...	
Tumour Scalp removed ...	...	1	...	...	...	
Tumour Orbit excision and removal Eyeball ...	...	1	...	...	...	
Sarcoma shoulder exploroto- my incision too large for removal ...	...	1	...	...	...	
Osteoma Frontal Exploration ...	...	1	...	...	...	
Warty growth vulva removed ...	...	1	...	...	...	
Tumour of Breast removed ...	...	1	...	...	...	
Keloid of ear removed ...	...	1	...	...	...	
Lipoma of Scalp excision ...	...	1	...	...	...	
Parturition Forceps ...	...	1	...	...	...	
Pregnancy 12 weeks Os delat- ed and uterus cleared out ...	...	1	...	...	...	
TOTAL ...	...	196	...	...	...	

PROVINCE WELLESLEY.

Return of the Statistics of Population for the Year 1909.

					Europeans.	Eurians.	Malays.	Chinese.	Tamils.	Other Nationalities.	Unknown.	TOTAL.
Number of inhabitants in 1909	...				253	329	69,079	29,516	21,857	1,682	...	122,216
„ Births during the year 1909					6	9	2,828	542	486	9	...	3,880
„ Deaths „ „ 1909					2	8	1,976	940	885	10	2	3,823
„ Immigrants „ 1909					} No data available.							
„ Emigrants „ 1909												
Number of inhabitants in 1908	...				240	324	69,052	28,739	21,494	1,561	...	121,410
Increase	...	...	...	...	13	5	27	277	363	...	...	685
or Decrease	...	...	...	...	...	...	...	...	...	121	...	121

Meteorological Return for the Year 1909.

		TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
		Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
		°F	°F	°F	°F	°F	°F	Inches.	o/o			
January	...	152'1	70'4	91'5	72'5	19'0	82'9	17'81	72'0	W.	4	
February	...	153'6	69'7	90'9	71'7	19'2	82'4	16'18	73'0	N.W.	4	
March	...	159'2	71'6	93'1	73'5	19'6	85'3	15'29	69'0	N.W.	4	
April	...	156'0	70'8	92'0	72'7	19'3	84'3	12'32	73'0	N.W.	4	
May	...	147'7	71'1	91'6	72'7	18'9	84'1	20'79	72'0	N.W.	4	
June	...	145'5	70'6	90'7	72'3	18'4	83'5	13'27	73'0	N.W.	4	
July	...	150'5	71'1	91'5	72'9	18'6	84'1	7'91	71'0	N.W.	4	
August	...	147'5	70'6	90'2	71'6	18'6	82'5	27'53	74'0	S.W.	4	
September	...	148'2	70'9	90'7	72'6	18'1	83'8	23'11	73'0	N.W.	4	
October	...	144'3	70'5	90'1	72'0	18'1	82'8	32'08	77'0	S.W.	4	
November	...	145'8	70'9	89'3	72'3	17'0	82'3	24'19	74'0	N.W.	4	
December	...	150'9	69'8	89'9	71'4	18'5	81'8	10'24	75'0	N.W.	4	
Mean	...	150'1	70'6	90'9	72'3	18'6	83'3	Total 225'72	73'0			

PROVINCE WELLESLEY.

*Return of Diseases and Deaths in 1909 at the following Institutions:—
Butterworth, Bukit Mertajam and Sungai Bakap Hospitals.*

DISEASES	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL,		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri ...	20	59	9	79	6	
Cerebro-Spinal fever ...	...	1	...	1	...	
Chicken-pox ...	...	11	...	11	...	
Dysentery ...	8	253	86	261	7	
Enteric fever ...	...	3	3	3	...	
Erysipelas ...	...	3	2	3	...	
Gonorrhœa ...	2	32	...	34	1	
Gonorrhœal Ophthalmia ...	...	2	...	2	...	
" Synovitis ...	...	1	...	1	...	
" Arthritis ...	3	29	...	32	2	
" Orchitis ...	1	...	...	1	...	
" Warts ...	...	3	...	3	...	
Leprosy ...	...	5	1	5	...	
Madura-foot ...	...	1	...	1	...	
Malarial Fever, B. Tertian ...	...	152	1	152	3	
" Quartan ...	...	11	...	11	...	
" Malignant ...	3	183	21	186	3	
" Cachexia ...	...	46	5	46	...	
Ague Cake ...	1	5	...	6	1	
Measles ...	...	10	...	10	1	
Mumps ...	...	1	...	1	...	
Phagedæna ...	1	7	3	8	...	
Pneumonia ...	...	13	5	13	...	
Pyrexia of uncertain Origin ...	...	31	...	31	1	
Rheumatism ...	2	24	...	26	1	
Sapræmia ...	...	2	2	2	...	
Small-pox ...	...	3	...	3	...	
Syphilis, Primary ...	...	6	...	6	2	
" Secondary ...	10	158	4	168	8	
" Tertiary ...	...	20	...	20	1	
Tubercular Glands Abdomen ...	...	1	1	1	...	
" " Neck ...	...	1	...	1	...	
" Arthritis ...	...	3	...	3	...	
" Kidneys & bladder ...	...	1	1	1	...	
Yaws ...	...	1	...	1	...	
INTOXICATIONS.						
Alcoholism ...	...	3	...	3	...	
Opium Habit ...	...	10	...	10	...	
GENERAL DISEASES NOT INCLUDED IN THE TWO PRECEDING GROUPS.						
Anæmia ...	4	46	17	50	2	
Scurvy ...	...	1	...	1	...	
CERTAIN MORBID CON- DITIONS INCIDENT TO VARIOUS PARTS.						
Malformations ...	...	1	...	1	...	
New-growth, Non-Malignant ...	..	6	...	6	...	
" Malignant ...	1	12	4	13	3	
Cyst ...	...	3	...	3	...	
DISEASES, NERVOUS SYSTEM.						
Neuritis ...	1	4	...	5	...	
Spinal Meningitis ...	...	1	...	1	...	
Myelitis. ...	1	4	2	5	1	
Carried forward ...	58	1,173	167	1,231	43	

*Return of Diseases and Deaths in 1909 at the Province Wellesley
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	58	1,173	167	1,231	43	
DISEASES NERVOUS SYSTEM.—Continued.						
Lateral Sclerosis ...	...	2	...	2	...	
Bell's Palsy ...	...	1	...	1	...	
Multiple Sclerosis ...	...	1	...	1	1	
Apoplexy ...	...	2	1	2	...	
Hemiplegia ...	3	5	1	8	2	
Spastic Paraplegia ...	1	1	1	2	1	
Epilepsy ...	...	2	...	2	...	
Neuralgia ...	...	4	...	4	...	
Hysteria ...	...	3	...	3	...	
General Paralysis ...	...	1	1	1	...	
DISEASES OF THE EYE.						
Conjunctivitis Catarrhal ...	2	13	...	15	1	
Keratitis ...	...	1	...	1	...	
Ulcer Cornea ...	1	7	...	8	1	
Opacity Cornea ...	...	2	...	2	...	
Iritis ...	...	5	...	5	...	
Posterior Synchia ...	...	1	...	1	...	
Cataract ...	...	4	...	4	...	
Shrunken-eyeball ...	...	1	...	1	...	
Entropion ...	...	2	...	2	...	
Ectropion-eyelid ...	...	1	...	1	...	
DISEASES OF THE EAR.						
Otitis External ...	...	4	...	4	1	
DISEASES, CIRCULATORY SYSTEM.						
Pericarditis ...	...	2	2	2	...	
Endocarditis ...	...	1	1	1	...	
Valvular Disease of Heart ...	2	42	13	44	2	
Arrhythmia Cordis ...	...	1	...	1	...	
Aneurism ...	...	2	...	2	...	
DISEASES, RESPIRATORY SYSTEM.						
Asthma ...	...	14	...	14	...	
Bronchitis ...	2	44	1	46	1	
Hæmoptysis ...	...	1	...	1	...	
Broncho-Pneumonia ...	...	2	1	2	...	
Abscess Lung ...	1	1	1	2	...	
Phthisis ...	7	81	45	88	8	
Pleurisy ...	...	10	...	10	...	
Empyema ...	1	9	5	10	1	
DISEASES, DIGESTIVE SYSTEM.						
Gangrenous Stomatitis ...	...	2	1	2	...	
Necrosis Lower-jaw ...	...	2	...	2	...	
Caries Tooth ...	...	1	...	1	...	
Alveolar Abscess ...	...	1	...	1	...	
Pharyngitis ...	...	3	...	3	...	
Gastritis ...	...	8	...	8	...	
Gastric Ulcer ...	1	1	...	2	...	
Indigestion ...	1	25	...	26	1	
Gastralgia ...	1	2	...	3	...	
Enteritis ...	1	4	2	5	...	
<i>Carried forward ...</i>	82	1,495	243	1,577	63	

*Return of Diseases and Deaths in 1909 at the Province Wellesley
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	82	1,495	243	1,577	63	
DISEASES, DIGESTIVE SYSTEM.—Continued.						
Entero-colitis	...	2	1	2	...	
Perityphilitis	...	1	...	1	...	
Colitis	...	1	...	1	...	
Sprue	...	3	...	3	...	
Inguinal Hernia	...	3	...	3	...	
Intestinal Obstruction	...	1	1	1	...	
Diarrhœa	6	120	47	126	...	
Constipation	...	5	...	5	...	
Colic	...	24	...	24	1	
Dilatation Stomach	...	1	...	1	...	
Ulcer Rectum	...	1	...	1	...	
Fistula in Ano	...	5	...	5	...	
Hæmorrhoids	...	8	...	8	...	
Prolapse Rectum	...	1	...	1	...	
Cirrhosis of Liver	3	18	12	21	1	
Hepatic Abscess	...	1	...	1	...	
Jaundice	...	3	...	3	1	
Acute Yellow Atrophy Liver	...	1	1	1	...	
Peritonitis	...	2	2	2	...	
DISEASES, LYMPHATIC SYSTEM.						
Splenitis	...	1	...	1	...	
Lymphadenitis	2	4	...	6	...	
Bubo	6	24	...	30	...	
Lymphangitis	...	1	...	1	...	
DISEASES, THYROID GLAND.						
Goitre	...	2	...	2	...	
DISEASES, URINARY SYSTEM.						
Bright's Disease	2	36	9	38	1	
Cystitis	...	2	...	2	...	
Albuminuria	...	2	...	2	...	
DISEASES, GENERATIVE SYSTEM.						
MALE ORGANS.						
Urethritis	...	1	...	1	...	
Stricture Urethra	...	4	...	4	...	
Urethral Fistula	...	2	...	2	1	
Urethral Calculus	...	2	...	2	...	
Hypertrophy Prostate	...	1	...	1	...	
Phimosis	...	24	...	24	...	
Paraphimosis	...	5	...	5	...	
Chancroids	3	64	...	67	2	
Abscess Scrotum	...	1	...	1	...	
Varicocele	...	1	...	1	...	
Hydrocele	...	3	...	3	...	
Hamatocele	...	1	...	1	...	
Orchitis	...	3	...	3	...	
Hernia Testis	...	1	...	1	...	
DISEASES, GENERATIVE SYSTEM.						
FEMALE ORGANS.						
Parametritis	...	1	...	1	...	
Endometritis	...	1	...	1	...	
Granular Erosion of Cervix	...	1	...	1	...	
Adherent Placenta	...	1	1	1	...	
<i>Carried forward ...</i>	104	1,885	317	1,989	74	

*Return of Diseases and Deaths in 1909 at the Province Wellesley
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	104	1,885	317	1,989	74	
DISEASES, GENERA- TIVE SYSTEM.						
FEMALE ORGANS.						
<i>Continued.</i>						
Retroversion Uterus ...	...	1	...	1	...	
Prolapse Uterus ...	...	1	...	1	...	
Sinus Vulva ...	...	1	...	1	...	
Dysmenorrhœa ...	...	5	...	5	...	
DISEASES, ORGANS OF LOCOMOTION, BONES.						
Periostitis ...	...	6	...	6	...	
Osteitis ...	...	1	...	1	...	
Necrosis ...	...	15	...	15	...	
Ankylosis Shoulder ...	...	1	...	1	...	
Hip-joint Disease ...	1	...	...	1	...	
Synovitis ...	...	8	...	8	1	
Myalgia ...	...	26	...	26	...	
Lumbago ...	...	2	...	2	...	
DISEASES, CONNECTIVE TISSUE.						
Cellulitis ...	...	14	1	14	...	
Abscess ...	6	49	...	55	2	
Gangrene ...	1	...	...	1	...	
Elephantiasis ...	...	1	...	1	...	
DISEASES OF THE SKIN.						
Eczema ...	1	24	...	25	2	
Boil ...	...	3	...	3	...	
Carbuncle ...	...	2	...	2	...	
Ichthyosis ...	...	1	...	1	...	
Psoriasis ...	...	2	...	2	...	
Impetigo ...	1	5	...	6	...	
Lichen ...	...	1	...	1	...	
Ulcer ...	18	323	...	341	17	
Whitlow ...	...	2	...	2	...	
GENERAL INJURIES.						
Burns ...	1	6	1	7	2	
Multiple Injuries ...	1	7	...	8	...	
Shock ...	...	1	1	1	...	
LOCAL INJURIES.						
Contusions ...	...	18	...	18	...	
INJURIES OF ANATOMI- CAL REGIONS, HEAD AND NECK.						
Wounds ...	3	39	...	42	1	
Concussion Brain ...	1	...	...	1	...	
Severed Tongue ...	...	1	...	1	..	
<i>Carried forward ...</i>	138	2,451	320	2,589	99	

*Return of Diseases and Deaths in 1909 at the Province Wellesley
Hospitals.—Continued.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	138	2,451	320	2,589	99	
INJURIES OF ANATOMI- CAL REGIONS.— <i>continued.</i>						
TRUNK AND ABDOMEN.						
Punctured Wound Abdomen	1	2	...	3	...	
Gun-shot Wound Abdomen	...	1	1	1	...	
Penetrating Wound Abdomen	...	1	...	1	1	
Ruptured Urethra	...	1	...	1	...	
Punctured Wound back	...	1	...	1	...	
Sprain back	...	1	...	1	...	
UPPER EXTREMITIES.						
Wounds	2	5	...	7	...	
Dislocation Shoulder	...	2	...	2	...	
Sprain Wrist	...	1	...	1	...	
LOWER EXTREMITIES.						
Wounds	...	35	...	35	1	
Sprain Ankle	1	2	...	3	...	
FRACTURES.						
Fracture Skull	...	2	1	2	...	
Fracture & dislocation Spine	...	1	...	1	...	
„ Ribs	...	2	...	2	...	
„ Clavicle	...	2	...	2	...	
Fracture upper extremities (Simple)	1	6	...	7	...	
Fracture upper extremities (Compound)	2	9	...	11	1	
Fracture lower extremities (Simple)	1	1	...	2	...	
Fracture lower extremities (Compound)	2	2	1	4	...	
Alligator-bite	...	4	...	4	...	
Snake-bite	...	1	...	1	...	
Wasp-stings	...	1	...	1	...	
Boar-gore	...	1	...	1	...	
Buffalo-gore	...	1	...	1	...	
POISONS.						
Ptomaine Poisoning	...	1	...	1	...	
PARASITES.						
Anchylostomiasis	4	97	19	101	14	
Scabies	...	29	...	29	...	
Ringworm	...	1	...	1	...	
Observation for Insanity	...	20	...	20	1	
No Appreciable Diseases	...	12	...	12	...	
Total ...	152	2,696	342	2,848	117	
OPERATIONS PERFORMED IN 1909.						
Laparotomy for intestinal Obstruction	...	2	...	...	...	
Ovariectomy for Ovarian Cyst	...	1	...	...	...	
Resection of Ribs for Em- pyema	...	7	...	...	...	
Radical cure Inguinal Hernia	...	2	...	...	...	
Radical cure for Hydrocele	...	2	...	...	...	
Appendicostomy	...	1	...	...	...	
Amputation of limbs for disease and injuries	...	11	...	...	...	
<i>Carried forward ...</i>	...	26	...	...	...	

*Return of Diseases and Deaths in 1909 at the Province Wellesley
Hospitals.—Concluded.*

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	...	26	...	...	...	
OPERATIONS PERFORMED IN 1909.— <i>Continued.</i>						
Circumcisions ...	...	26	...	...	...	
Sequestrotomy ...	...	4	...	...	...	
Operation for Fistula in ano ...	...	2	...	...	...	
Ligature and excision of piles ...	...	3	...	...	...	
Ligature of brachial artery ...	...	1	...	...	...	
Castration ...	...	1	...	...	...	
Amputation of penis for malignant growths ...	...	2	...	...	...	
Theirsh's Skin grafting ...	...	3	...	...	...	
Hepatic Abscess ...	...	1	...	...	...	
Paracentesis Thoracis ...	...	3	...	...	...	
Orthrectomy ...	...	1	...	...	...	
Excision of Joints ...	...	1	...	...	...	
Enucleation inguinal glands ...	...	2	...	...	...	
" cervical and axillary glands ...	...	2	...	...	...	
Removal impacted urethral calculus ...	...	1	...	...	...	
Opening up Abscesses ...	...	42	...	...	...	
Total ...	...	121	...	...	...	

MALACCA.*Return of the Statistics of Population for the Year 1909.*

	Europeans.	Eurasians.	Malays.	Chinese.	Tamils.	Other Nationalities.	TOTAL.
Number of inhabitants in 1909 ...	55	1,496	75,241	20,617	1,039	78	98,526
„ Births during the year 1909 ...	...	63	3,225	651	50	54	4,043
„ Deaths „ „ 1909 ...	...	57	2,647	1,071	242	68	4,085
„ Immigrants „ „ 1909	} No data available.						
„ Emigrants „ „ 1909							
Number of inhabitants in 1908 ...	56	1,507	74,963	20,474	1,059	79	98,138
Increase or Decrease ...	...	...	278	143	...	...	421
Decrease ...	1	11	...	...	20	1	33

Meteorological Return for the Year 1909.

I	TEMPERATURE.						RAINFALL.		WINDS.		REMARKS.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
January ...	°F 152°0	°F 64°0	°F 86°0	°F 76°0	°F 10°0	°F 80°0	Ins. 4°95	% 94°0	N E.	182°3	
February ...	155°0	64°0	86°0	77°0	11°0	79°0	3°25	92°0	N.W.	188°2	
March ...	153°0	65°0	87°0	75°0	12°0	82°0	4°08	93°0	N.W.	189°4	
April ...	149°2	85°6	90°0	73°0	18°0	82°0	13°81	91°0	—	—	
May ...	142°3	70°6	87°0	75°0	12°0	83°0	4°34	91°2	N.W.	193°6	
June ...	140°0	70°3	89°0	73°0	16°0	81°0	6°14	95°0	W.	197°5	
July ...	143°7	70°5	89°7	72°4	15°3	82°0	1°36	94°3	N.W.	195°3	
August ...	146°0	69°5	89°2	72°1	17°1	81°9	16°15	95°6	S.W.	199°8	
September ...	146°0	69°0	89°0	72°0	17°0	81°8	11°69	92°0	S.W.	202°6	
October ...	146°0	67°0	89°0	72°0	17°0	81°0	5°57	93°0	S.W.	200°4	
November ...	145°0	69°0	89°8	71°9	17°9	81°3	10°19	95°9	N.W.	190°8	
December ...	144°6	67°3	89°9	71°9	18°0	81°1	5°96	95°9	N.E.	187°8	
Mean ...	146°9	69°3	88°4	73°4	15°1	81°3	Total 87°49	93°5		193°4	

MALACCA.

Return of Diseases and Deaths in 1909 at the following Institutions:—General, Pauper, Contagious Disease, Leper, Prison, Alor Gajah and Jasin Hospitals.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
INFECTIVE DISEASES.						
Beri-beri	73	451	52	524	50	
Chicken-pox	...	1	...	1	...	
Dysentery	4	96	42	100	7	
Gangrene	...	4	4	4	...	
Erysipelas	...	2	2	2	...	
Gonorrhœa	...	13	...	13	1	
Leprosy	2	8	...	10	...	
Malaria	...	...	...	...	...	
„ Benign tertian	8	186	4	194	7	
„ Subtertian	1	173	16	174	...	
„ Quartan	1	3	...	4	...	
„ Chronic	5	18	1	23	2	
„ Unclassified	11	151	7	162	4	
Measles	...	1	...	1	...	
Mumps	1	3	...	4	...	
Phagedæna	2	27	18	29	3	
Pneumonia	1	27	17	28	1	
Pyrexia	...	95	...	95	8	
Rheumatism	1	16	...	17	2	
Chronic Rheumatism	1	1	...	2	1	
Syphilis, Primary	...	1	...	1	...	
„ Secondary	18	170	9	188	12	
Small-pox	...	2	...	2	...	
Tuberculosis	1	19	10	20	...	
GENERAL DISEASES.						
Anæmia	4	31	4	35	2	
Lymphadenoma	...	2	...	2	...	
MORBID CONDITIONS.						
New growth, Malignant	...	5	1	5	...	
Cyst	...	2	...	2	...	
NERVOUS SYSTEM.						
Neuritis	...	4	...	4	1	
Paraplegia	...	1	1	1	...	
Hemiplegia	...	3	...	3	...	
Monoplegia	1	...	...	1	...	
Paralysis	...	2	1	2	1	
Chorea	...	1	...	1	...	
Epilepsy	...	2	...	2	...	
Acute Mania	...	2	...	2	...	
Melancholia	...	1	...	1	1	
EYE.						
Ophthalmia Catarrhal	1	12	...	13	1	
„ Gonorrhœal	...	3	...	3	...	
Disorganized Eyeball	...	2	...	2	1	
Ulcer Cornea	1	3	...	4	...	
Opacity Cornea	1	4	...	5	...	
Staphyloma	1	3	...	4	1	
Iritis	2	...	...	2	...	
Keratitis	1	...	...	1	...	
Glaucoma	...	2	...	2	1	
Cataract	...	3	...	3	2	
Dacryocystitis	...	1	...	1	...	
Sty	...	1	...	1	...	
Carried forward...	142	1,558	189	1,700	109	

Return of Diseases and Deaths in 1909 at the Malacca Hospitals.—Continued.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward ...</i>	142	1,558	189	1,700	109	
EAR.						
Inflammation Ext. Ear ...	...	1	...	1	...	
CIRCULATORY SYSTEM.						
Valvular Disease of Heart ...	1	15	5	16	2	
Aneurism ...	...	1	...	1	1	
RESPIRATORY SYSTEM.						
Asthma ...	...	13	...	13	...	
Bronchitis ...	...	27	2	27	6	
Phthisis ...	5	63	50	68	1	
Pleurisy ...	...	5	3	5	...	
Emphysema ...	...	1	1	1	...	
DIGESTIVE SYSTEM.						
Stomatitis ...	...	4	...	4	...	
Nicrosis tooth ...	...	1	...	1	...	
Epithelioma Tongue ...	...	1	...	1	...	
Stricture Esophagus ...	...	1	...	1	...	
Dilated Stomach ...	...	1	...	1	...	
Dyspepsia ...	...	7	...	7	...	
Enteritis ...	...	3	1	3	1	
Appendicitis ...	1	...	...	1	...	
Diarrhœa ...	...	37	19	37	...	
Intestinal Colic ...	...	5	...	5	...	
Fistula in Ano ...	...	1	...	1	...	
Pile ...	...	1	...	1	...	
Prolapse Ani ...	1	...	...	1	...	
Cirrhosis Liver ...	1	18	10	19	2	
Hepatitis ...	...	4	...	4	...	
Jaundice ...	...	1	...	1	...	
Cholecystitis ...	...	2	2	2	...	
Ascites ...	...	2	...	2	...	
LYMPHATIC SYSTEM.						
Abscess Spleen ...	...	1	1	1	...	
Bubo ...	1	3	...	4	1	
URINARY SYSTEM.						
Nephritis ...	3	73	31	76	9	
Calculus Vesical ...	...	5	...	5	1	
Stricture Urethra ...	...	6	...	6	...	
Extravasation of Urine ...	...	2	...	2	...	
GENERATIVE SYSTEM.						
Phimosis ...	...	3	...	3	1	
Ulcer Penis ...	...	9	...	9	3	
Epithelioma Penis ...	...	1	...	1	...	
Soft Chancre ...	...	3	...	3	...	
Abscess Scrotum ...	2	...	...	2	2	
Hydrocele ...	...	6	...	6	...	
Orchitis ...	...	6	...	6	1	
Hernia Testis ...	...	4	...	4	...	
Ulcer Vulva ...	1	1	...	2	...	
Amencorrhœa ...	...	1	...	1	...	
AFFECTIONS CONSEQUENT ON PARTURITION.						
Puerperal Sapræmia ...	...	3	3	3	...	
<i>Carried forward ...</i>	158	1,900	317	2,058	140	

Return of Diseases and Deaths in 1909 at the Malacca Hospitals.—Concluded.

DISEASES.	Remain- ing in Hospital at end of 1908.	YEARLY TOTAL.		Total Cases Treated.	Remain- ing in Hospital at end of 1909.	REMARKS.
		Admis- sions.	Deaths.			
<i>Brought forward...</i>	158	1,900	317	2,058	140	
ORGANS OF LOCO- MOTION.						
Caries	...	3	...	3	...	
Synovitis	...	1	...	1	...	
Arthritis	...	3	...	3	...	
Atrophy of Muscles	...	1	...	1	...	
Lumbago	...	1	...	1	...	
Ganglion	...	1	...	1	...	
CONNECTIVE TISSUE.						
Cellulitis	2	4	1	6	1	
Abscess	3	39	1	42	2	
Elephantiasis	1	...	...	1	...	
Boil	...	2	...	2	...	
SKIN.						
Eczema	4	25	...	29	2	
Ulcer	95	506	2	601	63	
Tinea Tricophytina	1	...	...	1	...	
„ Imbricata	...	5	...	5	...	
Scabies	5	47	...	52	2	
Carbuncle	...	1	...	1	...	
Pemphigus	...	1	...	1	...	
Wart	...	2	...	2	...	
INJURIES.						
Scald	...	3	...	3	1	
Contusion	...	15	...	15	...	
Wound	...	49	1	49	...	
Strain	...	1	...	1	...	
Fracture	2	14	1	16	2	
POISON.						
Strychnine	...	1	...	1	...	
PARASITES.						
Tinea Solium	...	1	...	1	...	
Ascaris Lumbricoides	...	7	...	7	1	
Ankylostomiasis	6	65	27	71	2	
OBSERVATION	5	101	...	106	...	
NO APPRECIABLE DISEASE.	2	34	...	36	...	
Total ...	284	2,833	350	3,117	216	
LIST OF OPERATIONS.						
Enucleation of Eyeball	...	1	...	...	...	
Removal of Malignant growth neck	...	1	...	...	...	
Radical Cure for Hydrocele	...	3	...	...	...	
Suprapubic Lithotomy	...	3	...	...	...	
Lateral „	...	1	...	...	...	
Removal of Hæmorrhoids...	...	1	...	...	...	
Amputation penis	...	1	...	...	...	
„ fingers	...	1	...	...	...	
„ forearm	...	1	...	...	...	
„ leg	...	1	...	...	...	
Circumcision	...	1	...	...	...	
Total ...	...	15	...	...	...	

